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ABSTRACT

Twenty-two fifth-grade teachers participated in a study designed to determine whether, given typical basal text material and the opportunity to learn, the more effective classroom teachers of reading would be those who provided explicit explanations on how to use reading skills strategically when reading. The treatment group of teachers was trained in how to explain to low reading groups what strategies could be used, when they should be used, and how to apply them. The control group participated in a workshop on effective classroom management. Subsequently, the low-group reading instruction of each treatment and control teacher was observed four times at one month intervals. Students were pretested and posttested with the Gates-McGinitie Reading Achievement Test. Results suggested that teachers were able to incorporate explanatory talk into their lessons and that this talk resulted in greater student awareness. However, no achievement gains were found. Qualitative analysis of the explanations of teachers who were more and less effective in creating awareness outcomes resulted in the identification of distinguishing descriptive characteristics of effective explanation and suggested reasons why some teachers were not more effective. (Copies of materials used in the study are appended.) (HOD)

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Research Series No. 158

TEACHER EXPLANATION DURING READING INSTRUCTION: A TECHNIAL REPORT OF THE 1982-83 STUDY

Laura R. Roehler, Gerald G. Duffy, Cassandra
Book, Michael S. Meloth, Linda G. Vavrus,
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Abstract

Evidence from reading comprehension research suggests that an awareness of reading comprehension strategies discriminates between good and poor readers. Training studies further suggest that the use of these strategies results in achievement gains. However, studies of classroom practice indicate that most reading instruction emphasizes answer accuracy and recitations from basal texts rather than strategies. The study reported here was an attempt to train classroom teachers in how to explain to low reading groups what strategies can be used, when they should be used, and how to apply them. Twenty-two teachers participated in the study. The basic hypothesis was that explicit teacher explanation of reading strategies would result in increased student awareness of reading strategies which, in turn, would lead to increased reading achievement on standardized measures. Experimental results suggest that teachers were able to incorporate explanatory talk into their lessons and that this talk resulted in greater student awareness. However, no achievement gains were found. Qualitative analysis of the explanations of teachers who were more and less effective in creating awareness outcomes resulted in the identification of distinguishing descriptive characteristics of effective explanation and suggested reasons why some teachers were not more effective. The implications of these reasons for future studies and for teacher education are provided.

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TEACHER EXPLANATION DURING READING INSTRUCTION: A TECHNICAL REPORT OF THE 1982-83 STUDY

Laura R. Roehler, Gerald G. Dufy, Cassandra Book, Michael Meloth,
Linda G. Vavrus, Joyce Putnam, and Roy Wesselman[1]

Research in metacognition and reading comprehension indicate that awareness of the demands of a particular reading task is an important variable in successful reading (Brown, 1980) and that the appropriate selection and application of reading strategies have been found to differentiate between readers of differing ability (Brown, 1978; Markman, 1977). Recently, a converging paradigm of classroom research have begun to focus on student mediation of instruction as an important component in academic learning (Doyle, 1983). Descriptive studies of students' thinking have identified certain cognitive processes as predictors of achievement, such as comparing, using rules, metacognition (Winne & Marx, 1982), relating content to prior knowledge, using specific strategies and using problem-solving steps that are demanded by the task (Peterson, Swing, Braverman, & Buss, 1982). Similarly, reading comprehension research has emphasized the important role of specific strategies (Paris, Lipson & Wixon, 1983). To date however, there have been no instructional studies that attempt to link research on metacognition and student mediation with reading achievement, nor have there been studies of the teacher's instructional role in creating metacognitive outcomes in classroom reading instruction.

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[1] Laura Roehler and Gerald Duffy co-coordinate the Teacher Explanation Project. Cassandra Book, Joyce Putnam, and Roy Wesselman are project members. Michael Meloth and Linda Vavrus are IRT graduate assistants. Roehler and Duffy are professors, Book, Putnam and Wesselman are associate professors, and Vavrus is a Ph.D. candidate, all with the Department of Teacher Education. Meloth is a Ph.D. candidate with the Department of Counseling, Educational Psychology and Special Education. Book also serves as assistant dean of education.

Background

Viewing the nature of learning as active, planned, and strategic has gained wide acceptance over the past decade, suggesting that the individual's ability to apply conscious strategies when confronted with a difficult or novel task is a major difference between efficient and inefficient learning (Bransford, 1979; Flavell & Wellman, 1977; Brown, 1980; Calfee, 1981). Research in metacognition and reading comprehension has identified two instances in which the use of a consciously strategic and planned approach to reading discriminates between readers of differing abilities. The first is when a reader encounters a situation requiring the acquisition of new knowledge (Brown, 1980). The second is when a reader's understanding of text is disrupted (Paris, Lipson, & Wixson, 1983; Brown, 1980). As Bransford (1979) suggests, successful readers know what they themselves need to do in order to comprehend tasks or to solve complex problems.

Such reading calls for a repertoire of cognitive and metacognitive strategies that enable readers to apply declarative and procedural knowledge (Meloth, 1984). Recently, Paris (1984) discussed the important additional role played by conditional knowledge, that is, knowing when a strategy should be employed. Thus, when good readers learn new information or encounter difficulty in processing text, they (a) know what strategies are likely to be successful, (b) select a specific strategy, and (c) carry out the strategy successfully. Poor readers, in contrast, use less strategies, and do not evaluate the results of the strategies they do apply (Brown & Smiley, 1978; Paris & Myers, 1981; Markman, 1979; Bransford, Stein, Shelton, & Owings, 1981).

Brown (1980) suggests that these cognitive and metacognitive strategies can be taught and that learners can learn to use them to solve problems. Training studies provide growing evidence that poor readers can be directly taught to be metacognitively aware of specific strategies and how to apply these strategies appropriately (Brown, 1978; Palincsar & Brown, in press; Feuerstein, 1982; Brown, Bransford, Ferrara, & Campione, 1983; Pressley & Levin, 1983). However, there is little evidence about the effect of teaching learners to read strategically in the natural classroom environment.

To date, effective classroom instruction has been associated with opportunity to learn. Process-product and teacher effectiveness research has identified engaged instructional time as perhaps the most important element in instruction, with studies conducted over the past decade repeatedly reporting consistent, positive correlations between instructional time and student achievement (Bloom, 1974; Borg, 1980; Fisher et al., 1980; Rosenshine & Berliner, 1978; Wyne & Stuck, 1979).

Because creating time on-task is important, there has been a recent emphasis on direct instruction and classroom management of such variables as the elicititation of a maximum number of student responses to a given task through content coverage, brisk pacing, the setting of high expectations, provision for extended practice and teacher structured activities (Anderson, Evertson, & Brophy, 1979; Anderson, Evertson, & Emmer, 1980; Barr, 1982; Brophy, 1983; Brophy & Putnam, 1979; Good, 1979; Kounin, 1970). When teachers employ such techniques well, the instructional time is used efficiently, and students tend to learn more. When such techniques are not employed, the instructional environment is more loosely structured, time is used less efficiently, and there is less learning.

However, classroom practice research indicates that most of the instructional time in most elementary reading classes is devoted to recitation from basal text stories and workbook exercises, with the primary outcome being answer accuracy. Little time is devoted to facilitating metacognitive awareness of how to become a strategic reader or to creating student awareness of how to use skills strategically when reading real books (Anderson, Brubaker, Alleman-Brooks, & Duffy, in press; Duffy & McIntyre, 1982; Durkin, 1978-79). The implications of such an instructional emphasis is explained by Doyle (1983), who argues that students make sense out of academic work by interpreting classroom events. When assigned academic reading tasks, for instance, students make interpretations about what they are supposed to learn by reference to the events associated with the task being assigned. If the task is one of accurate answer-getting, they conclude that reading is rote answer-getting; if the task is one of strategically and consciously applying skills to get meaning from text, they conclude that reading is strategic. Consequently, if reading instruction is intended to create strategic readers, teachers must engage students in strategic reading tasks and teach students how to apply strategies when reading. This places a premium on teacher explanation (Duffy & Roehler, 1982; Rosenshine, 1983) and on the benefits of having teachers "actively" explain the concept being taught prior to confirming or disconfirming student understanding (Good, 1983).

Problem

Given the importance of metacognitive awareness as a reading outcome, of efficient use of instructional time and content, and of the student as a mediator of instruction, this study was designed to determine whether, given typical basal text material and opportunity to learn, the more effective classroom teachers of reading would be those who provide explicit explanations of how to use reading skills strategically when reading. The basic hypothesis was that explicit teacher explanation of how to use prescribed skills as strategies would result in increased student awareness of strategic reading behavior which, in turn, would result in increased reading achievement on standardized measures. To investigate this hypothesis, an experimental study was designed to investigate the following research questions

1. Are teachers who are trained to provide more explicit explanations during low-group reading skill instruction more explicit than teachers who receive no training?
2. Are the low group students of teachers who are trained to provide explicit explanation more aware of how to use skills strategically than the low-group students of teachers who received no training?
3. Is achievement growth significantly greater for the low-group students of trained teachers than for the low-group students of untrained teachers?
4. Are there strong positive correlations between explicitness of teacher explanations and student awareness and achievement outcomes?
5. Are there strong positive correlations (a) between management ratings and the explicitness of teacher explanations and (b) between management ratings and student awareness and achievement outcomes?
6. Are there strong positive correlations (a) between the explicitness with which teachers convey information during instruction and student awareness and (b) between the explicitness of the pedagogical techniques used and student awareness?

In addition to the experimental questions, the study was designed to investigate the qualitative dimensions of explanatory talk during instruction. One question was posed:

What are the qualitative characteristics that distinguish effective instructional talk from less effective instructional talk?

Method for the Experiment

Subjects

Poor readers typically are deficient in the knowledge and use of reading strategies (Brown, 1978). Thus, the only requirement for participation in the study was that teachers must have in their classrooms students who have been identified as poor readers. Twenty-two fifth-grade teachers volunteered for the study. All were employed by a large urban school district in the midwest and each received renumeration for their participation. A baseline observation of each teacher (Observation 1) was conducted to establish the extent to which each teacher used explanation during reading instruction and to obtain a rating of each teacher's ability to establish student engagement on task through efficient classroom management. Teachers were then stratified on the basis of management ratings into high, medium, and low managers and randomly assigned to treatment or control groups (see Appendix A for the management observation form). Eight teachers were identified as high managers, nine as average managers, and five as low managers.

The number of students identified as poor readers (between one and two years below grade level) varied among classrooms from a low of 4 to a high of 22, with an average class size of 11.5. Teachers identified students as poor readers on the basis of scores on the Stanford Achievement Test and the recommendation of previous teachers.

Materials and Procedures

The study was initiated in early October 1982 with the pretest administration in all 22 classrooms of Form 2 of the Gates-McGinitie Reading Achievement Test. Early in November, researchers held an initial meeting with all 22 teachers to explain the study. Treatment or control group assignments were then announced. Following the announcement of group assignments, the treatment teachers met with researchers to receive their first training in how to use a teacher explanation model for skill instruction (see Appendix B for the initial set of training materials). The control group participated in a workshop on effective classroom management. Subsequently, the low-group reading instruction of each treatment and control teacher was observed four times at one month intervals until mid-April (Observations 2-5). All observations occurred in the natural classroom setting, and each lesson focused on whatever reading skill the teacher had planned to teach on that day in the normal course of following the prescribed basal text sequence (e.g., main idea, using dictionary guide words, suffixes, predicting outcomes, etc.). Directions for observers are contained in Appendix C. In late April, Form 1 of the Gates-McGinitie was administered to all low-group students as a posttest.

Prior to each observation cycle, treatment teachers met for two hours to receive training from the researchers in how to incorporate explicit explanations into their on-going skill instruction, for a total of ten hours of training. Training focused on (a) how to present prescribed skills (such as finding the main idea) as strategies; (b) how to make explicit statements about the reading skill being taught, when it would be used, and how to apply it strategically and (c) how to organize these statements into a lesson format that followed a sequence from the declarative presentation of information, to modeling, to instructional interaction with gradually diminished assistance, to practice and to application in connected text (see Appendix E for a lesson plan checklist). The training sessions were based on a staff development model that employed principles of explicit explanation similar to those taught to the treatment teachers (Roehler, Wesselman & Putnam, 1983). Control teachers received no intervention except for the initial session on classroom management (see Appendix B for explanation to control-group teachers).

The teacher explanation data consisted of audio tape recordings of the five observed reading lessons. Audio tapes of the observed lessons were transcribed (see Appendix D) and the typed transcripts were rated by teams of trained raters. The explicitness of teacher explanation was determined by scoring lesson transcripts according to criteria regarding (a) the conceptual information communicated by the teacher (what skill was being taught, when it would be used and how to do apply it strategically) and (b) the pedagogical means the teacher used to communicate the information (use of modeling, feedback, practice, application). The highest possible explanation rating was 22 points. Inter-rater reliability for the raters of teacher transcripts was .92 (see Appendix F for a copy of the rating form for teacher explanation and the conventions used by the raters).

The student metacognitive awareness data consisted of audio-tape recordings of interviews conducted with five low-group students immediately following observation of the last four lessons, in which questions were asked regarding what skill had been taught, when the student would use it and how one applies it strategically. Student interviews were transcribed, and student metacognitive awareness was determined by having trained raters score the transcripts of each student interview. The criteria focused on the students' verbal statements about the mental (strategic) processing one uses in employing a strategy, the context or situation in which the strategy is applied, and the thinking one employs when using the strategy. The highest possible student awareness rating was 12 points. The inter-rater reliability for the rating of student interviews was .78. Student interview ratings, as well as achievement scores on the Gates-McGinitie Reading Achievement Test, were aggregated by classroom. See Appendix G for a copy of the rating form for pupil awareness and the conventions used by the raters.

Results From the Experiment

A 2x3 way analysis of variance design, using teacher group (treatment/control) and management level (high/average/low) as independent variables were performed to test for differences in teacher explicitness, student awareness, and achievement. In addition, Pearson product-moment coefficients were calculated to investigate the relationships between explicitness, management, awareness, and achievement across all classrooms. Student awareness data were not available for the first observation, and management data were not available for the fourth observation.

Findings are presented for each of the six research questions.

Question 1

The first research question asked whether treatment teachers were significantly more explicit in their explanations during reading skill instruction than control teachers. Table 1 gives the means of both groups across all observations. An analysis of baseline observations indicated that treatment and control teachers did not differ in their use of explanation at

Table 1

Group Means for Teacher Explanation

	Observation				
Group	1	2	3	4	5
Treatment					
Mean	4.100	12.273	14.909	17.091	14.545
SD	5.216	5.442	4.300	2.166	5.429
Control					
Mean	4.100	4.727	4.455	6.091	5.455
SD	4.725	4.756	4.435	3.833	5.203

Table 2

Analysis of Variance for Final Explanation Ratings

Source of Variation	Sums of Squares	DF	Mean Square	F	Significance
Treatment/Control	512.270	1	512.270	19.439	.001
Management	56.925	2	28.463	1.080	.365
Treatment x Management Interactions	32.902	2	16.451	0.624	.549
Residual	395.300	16	26.353	---	--
Repeated Measures for Explanation Ratings					
Treatment/Control	1303.210	1	1303.210	26.878	.001
Management	211.050	2	105.525	2.176	.150
Treatment x Management	68.890	2	34.445	.710	.508
Within Cells	678.800	14	48.486	---	--

Note: Baseline data were missing for two teachers (1 treatment and 1 control) and were therefore deleted for the repeated measures analysis.

the beginning of the study (F = 0.0 (1, 19), p = 1.00). However, a repeated measures of analysis of variance (ANOVA), using the five observations as time points, revealed that the explanation behavior of treatment teachers differed significantly from control teachers after the first intervention session, and treatment teachers continued to improve in their use of explanation through the fourth observation with a slight but insignificant decline at the fifth observation (see Table 2).

Question 2

The second question asked whether the low-group students of treatment teachers were significantly more aware of what was being taught, when to use it and how to do it than the low-group students of control teachers. Students in the treatment classrooms steadily increased their level of awareness following observation while control students consistently maintained low levels of awareness (see Table 3). An analysis of variance of student awareness ratings following the second observation revealed significant differences between students in the treatment and the control classrooms (F = 9.656, df = 1, 15, p = .007). Therefore, an ANOVA using awareness ratings for the second observation as the covariate was performed. Results indicated that students of treatment teachers were significantly more aware on the fifth observation than students in the control classrooms. Results also indicated that management level affected awareness. Students of teachers who were rated as high managers in the treatment group (and thus provided more opportunity to learn) had greater awareness scores than did students in the control classrooms.

Table 3

Group Means for Student Awareness

	Observation				
Classrooms	1	2	3	4	5
Treatment					
Mean	---	6.007	6.150	6.883	7.011
SD	---	2.167	1.841	2.039	2.929
Control					
Mean	---	3.792	4.117	4.957	4.076
SD	---	1.845	2.335	1.405	2.162

Note: Data unavailabe for Observation 1.

Table 4

Analysis of Variance for Final Student Awareness Ratings

Sources of Variation	Sum of Squares	DF	Mean Square	F	Significance
Treatment/Control	33.217	1	33.217	6.913	.020
Management	38.764	2	19.382	4.034	.041
Treatment by Management Interaction	4.188	2	2.094	.436	.655
Covariate	40.957	1	40.957	8.524	.011
Residual	67.271	15	4.805	---	---

Question 3

The third question asked whether the low-group students of treatment teachers made significantly more achievement growth on the Gates-McGinitie Reading Achievement Test than the low-group students of the control teachers. A 2X3 way ANOVA revealed no initial differences on the Gates-McGinitie Reading Achievement Test ($F(1,21) = .017$, $p = .898$). The results of the Gates-McGinitie posttest, using classrooms as a covariate, revealed no significant achievement gains ($F = .036$, $df = 1,21$, $p = .853$).

Question 4

The fourth question focused on whether there was a direct positive correlation between explicitness of teacher explanation and the awareness and achievement outcomes across all classrooms. Results, as given in Table 5, showed a strong positive correlation between teacher explicitness and student metacognitive awareness indicating that, regardless of treatment or control, metacognitive awareness was strongly related to explanation behavior. No significant relationship was found between overall teacher explicitness and achievement ($r = .224$, $p = .158$).

Question 5

The fifth question examined the relationship between (a) teacher explicitness ratings, (b) teacher management levels, (c) student awareness, and (d) student achievement. As Table 5 indicates, there was no significant relationship between teacher explicitness and management for the baseline observation or for the second observation. However, significant relationships (p .05) between explicitness and management were found for the third and fifth observations. Similarly, the relationship between management and student

Table 5

Pearson Product-Moment Coefficients for Explanation, Awareness, Management and Achievement

	Observation				
	1	2	3	4	5
Student Awareness					
Explanation	---	.434	.608	.452	.629
Significance	---	(.022)	(.001)	(.017)	(.001)
Management	---	.208	.628	---	.576
Significance		(.176)	(.001)	---	(.002)
Student Achievement					
Exlanation		.224		Management	.155
Significance		(.146)		Significance	(.246)
Teacher Management					
Explanation	.248	.239	.452	---	.5771
Significance	(.146)	(.146)	(.017)	---	(.002)

Note. Dash means data are unavailable.

Table 6

Pearson Product-Moment Coefficients for Explanation Subcategories and Student Awareness

	Student Awareness				
Explanation	Observation				
Subcategory	1	2	3	4	5
Information	---	.483	.549	.437	.655
Significance	---	(.011)	(.004)	(.021)	(.001)
Means	---	.351	.634	.454	.581
Significance	---	(.055)	(.001)	(.017)	(.002)

Note. Dash means data are unavailable.

awareness was significant for the third observation and for the fifth observation, but not for the second observation. No significant relationship was found between management and achievement (r = .155, p = .246).

Question 6.

The sixth question asked whether there was a direct positive correlation (a) between the explicitness ratings for the information conveyed by teachers and the ratings of student awareness and (b) between the explicitness ratings for the pedagogical means by which the information was conveyed and student awareness. Significant positive relationships were found between the explicitness ratings for the information conveyed by teachers and student awareness for each observation. Significant relationships were also found between explicitness ratings for the pedagogical means by which the information was conveyed and student awareness for Observations 3, 4, and 5 (see Table 6).

Method for the Qualitative Analysis

While the original study experimentally established a strong relationship between the explicitness of a teacher's instructional talk and the awareness of low-group students, it did not identify the qualitative characteristics associated with effective and less effective explanatory talk. To do so, the instructional talk of the most effective and least effective teachers needed to be qualitatively examined. The sample used for the qualitative analysis consisted of the teachers who were most successful in creating awareness outcomes and those who were least successful. To select the most successful teachers, the awareness ratings for each classroom were averaged across the five observations. Those teachers whose average student awareness score was in the top quartile of the range of awareness scores across all 22 teachers were identified as most successful in creating awareness outcomes. These teachers whose average student awareness score was in the bottom quartile of the range of awareness scores were identified as least successful in creating awareness outcomes. Three teachers met the criteria for successfully creating awareness (Teacher A, B, and C); three teachers met the criteria for not being successful in creating awareness (Teacher X, Y, and Z). All three successful teachers were treatment teachers; the three unsuccessful teachers were all control teachers. There were no instances in which a treatment or control teacher had an average explicitness rating in the top quartile and an average awareness rating in the bottom quartile or in which the average explicitness rating was in the bottom quartile and the average awareness rating was in the top quartile.

The fifteen lessons taught by the three successful teachers were analyzed and compared to the fifteen lessons taught by the unsuccessful teachers. To determine the qualitative characteristics of successful explanatory talk, the following five-step procedure was followed. First, the lesson transcripts of the six teachers were examined to get a sense for what distinguished them qualitatively. Since it appeared that the three most effective teachers were devoting more instructional talk to assisting students while the three less effective teachers were providing less assistance, the second step was to count the lines in each lesson transcript to determine the percentage of lines devoted to assistance. Third, the assistance category was further analyzed to identify characteristics that further distinguished the explanation of the effective teachers from that of the least effective teachers. Fourth, illustrative examples of assistance were selected from the transcripts of the teachers. Finally, illustrative examples of additional distinguishing characteristics of explanatory talk of effective teachers were identified and contrasted with the talk of less effective teachers.

Results from the Qualitative Analysis

The instructional talk of the most effective teachers possess at least six distinguishing characteristics.

First, the instructional talk of the three most effective teachers can be characterized *by whether the talk was directed toward assistance rather than toward procedural or assessment concerns.* Procedural concerns focused on classroom routines and management; assessment talk was directed toward determining whether students can produce the right answer, and assistance talk was directed toward helping students by giving explicit directions, explanations, elaborations and clarifications. Typical of the procedural category are teacher statements such as: "Okay, close your books. Today we're going to do a board activity" or "I'm going to start with Andrew and give everybody a quick turn." Typical of the assessment category are teacher statements such as: "Okay, here's the 'c-i' sound. Who can show me what it says?" or "Will you do the next one for me? Those letters say what?" Typical of the assistance category are teacher statements such as: "Look at it. First, you're trying to break it into recognizable parts that you already know" or "Okay, but we're looking for a cluster, not a syllable." As seen in Table 7, a line-by-line analysis of the baseline observation indicated that the percentage of lines devoted to each category was virtually the same for all six teachers at the beginning of the year (the teachers who ultimately became most effective devoted an average of 61% of their talk to procedural

Table 7

Teacher Talk During Baseline and Observations 2-5

Teachers	Procedural concerns		Assessment/ answer giving		Assistance	
	B	2-5	B	2-5	B	2-5
Most effective						
A	88%	40%	2%	1%	10%	59%
B	37%	25%	55%	5%	9%	70%
C	58%	28%	34%	8%	8%	64%
Average	61%	31%	30%	5%	9%	64%
Least effective						
X	60%	71%	38%	18%	2%	11%
Y	90%	66%	6%	21%	4%	13%
Z	80%	49%	5%	43%	15%	8%
Average	77%	62%	16%	25%	7%	13%

concerns, 30% to assessment concerns and 9% to assistance while the three who ultimately proved to be less effective devoted an average of 77% of their talk to procedural concerns, 16% to assessment and 7% to assistance). However, the percentages changed during subsequent lessons taught by the more effective teachers as they applied what they were learning about instructional explanations. As seen in Table 7, their teacher talk during Observations 2-5 was 31% procedural, 5% assessment and 64% assistance while the average percentages of teacher talk for Teachers X, Y and Z during the same period remained essentially unchanged (an average of 62% procedural, 25% assessment and 13% assistance). Therefore, effective teacher explanation may be characterized as teacher talk that is directed toward assistance rather than toward procedural or assessment concerns.

Second, the three most effective teachers *provided assistance that emphasized strategic awareness of how one uses reading skills* while the less effective teachers, to the extent that they provided assistance at all, did so in ways that emphasized answer-getting rather than awareness of the mental processing used in doing the skill being taught. This became apparent when the lines of teacher talk categorized as "assistance" in the above section were further analyzed. For instance, the less effective teachers devoted 11% of their talk to assistance, and the entire 11% reflected answer-oriented elements (see Table 8). In contrast, 65% of the most effective teachers' instructional talk was devoted to assistance, of which 51% was directed toward helping students become strategic while only 14% was devoted to answer-oriented concerns.

The differences between strategic and non-strategic assistance can be illustrated by reference to the lesson transcripts. For instance, compare

Table 8

Teacher Talk Assistance

Teachers	Strategic assistance	Procedural assistance	Total
Most effective			
A	30%	29%	59%
B	68%	2%	70%
C	54%	11%	66%
Average	51%	14%	65%
Least effective			
X	0%	11%	11%
Z	0%	8%	8%
Y	0%	13%	13%
Average	0%	11%	11%

Teacher B and Teacher Z regarding their responses to students. Teacher B emphasizes the strategic element of "knowing how you know" by asking Chad to tell why he knows that the letter _c_ will make the sound /s/ in the word "decide":

T: Let's look at number four. Chad? Before you tell me the word, would you tell me what the "c" will say?

S: /s/

T: Why?

S: Because it's followed by "i."

T: And what do we know from that?

S: That if it's followed by the letter "i," it'll have the "s" sound.

T: Okay, now will you say the word for us?

S: Decide

T: Okay, good

In contrast, Teacher Z, during a lesson on hyphenated words, is concerned not with "knowing how you know" but with the correct answer:

T: They're asking you the meaning for the "glass-enclosed garden".

S: Eighty degrees inside the garden, inside the garden.

T: You have to use the hyphenated garden.

S: Eighty degrees inside the closed glass garden.

T: No, that changes the meaning. You said enclosed glass garden. It's not a glass garden. Michelle?

S: It was eighty degrees in the enclosed garden.

T: You left out glass. What was the garden enclosed in?

S: Glass.

T: All right. They used glass-enclosed garden.

Third, the explanations of the most effective teachers *are characterized by a cohesiveness from lesson to lesson.* For instance, note how Teacher C, when teaching implied main idea, makes explicit connections to the previously taught lessons on stated main idea:

T: Today we are going to continue what we've been doing all week....We've been figuring out how to find the main idea....This is probably one of the hardest things for us to learn. Now I want you to think. See if you can tell me what we already know about the main idea."

In contrast, the three less effective teachers typically introduced lessons without making reference to any previous related learning. For instance, Teacher Z introduced a lesson on prefixes without reference to previous lessons in structural analysis, despite the fact that such lessons had been taught previously.

Fourth, the most effective teachers *make frequent and tangible reference to the situational context in which the learning will be applied.* For instance, note how Teacher A emphasizes the application when introducing the lesson:

T: All right, I'm going to ask you to pretend that you have just picked up a book in the library and sometimes you will find some words in there that will not make any sense at all. There are some ways that you can figure out new words without having the teacher around, and I'd like to share with you some of these ways that I have used over the years.

She then returns to the applicability of the skill to real reading situations during instructional interaction later in the lesson:

T: Would it just be used for reading in class?

S: No (in unison).

S: English.

T: Anything. It should help you in reading newspapers, magazines, comic books, anything that you have.

She used a similar technique to establish situational context in a later lesson on using a table of contents:

T: In the event that you're in the library, why would you use the table of contents? Suppose you just choose a book and say, "Oh, let's see what this book is about." Why would you turn to the table of contents first? Robert?

S: So you won't be wasting your time looking through the book for butterflies.

T: Right. If your looking for something on butterflies, and you pick up the book on BANNERS, you'd look at the table of contents and see if there's any selections in this book on what?

S: Butterflies (in chorus).

T: Butterflies. If there's nothing in here, just because it might have a butterfly on the outside, it doesn't mean that they will have stories on the inside about what?

S: Butterflies (in chorus).

T: Butterflies. So you go through this table of contents.

Fifth, the explanations of the most effective teachers *are characterized by an attempt to make visible the invisible mental processing readers must engage in if they are to be strategic.* For instance, note how Teacher B models strategic mental processing when using a syllabication rule for dividing a word which has two or more consonants between two vowels:

T: Do you see where it says rules on your paper? Okay I'm going to read that rule to you. 'If a word has two or more consonants between two vowels, divide the word after the first consonant.' Now I'll show you what I'm talking about . . . .

I am going to use that rule and I am going to look at this word. Let's suppose I am a new reader and I come across this word and I don't know what that word is. I want to divide that word into syllables so that I can read it in my story or in my reading and I am going to look and I am going to use the rule. Okay. Here are two consonants coming between two vowels, the a and the e. Then it says I am going to divide the word after the first consonant--I am going to divide it right there (points). Now I am going to say the word by syllables, 'af-ter,' and I put it together and I have the word "after."

> Now let's say I come across another word in my reading, and I look at it and I have to see if there are two consonants that come between two vowels. Well, here is a vowel, it is followed by two consonants and another vowel. So I have two consonants here between two vowels. I say to myself, "I am going to divide it after the first consonant, now I am going to say each syllable, 'cab-bage,' oh, now I can put it together ' cabbage.' Okay, and that helps me pronounce that word.

In contrast, note that Teacher Y, in the following excerpt from a lesson on synonyms and antonyms, does virtually nothing to make visible for students the mental processing one does to determine whether two words are synonyms or antonyms:

> T: The first two were done for you. Let's see if we can go over these today and figure out what the word means. All right? Let's do the first two, just for practice. All right, the first one there is "buffalo" and "ox", and those two words mean what? The same or almost the same, so they are synonyms. All right, the next one there?
>
> S: Antonyms.
>
> T: "Patiently" and impatiently" and, of course, you can look at those words and automatically tell that they are...
>
> S: Antonyms
>
> T: Antonyms because they mean?
>
> S: Opposite.

Finally, the explanations of the most effective teachers are characterized by their *ability to respond with spontaneous elaborative explanations when students get confused during instructional interaction.* For instance, later in her lesson on syllabication, Teacher B observes that some students have misunderstood her previous explanation regarding how to use vowel-consonant patterns to determine where to divide a word in order to pronounce it. Note how she tries to respond with a spontaneously generated elaboration when a student becomes confused about where to divide the word 'chimney':

T: Let's look at word number 4. Again, let's divide it. (Pause) Okay, Steve would you tell us how you divided it?

S: I divided it after the first....

T: Can you tell me what letter you divided it after?

S: The _i_.

T: After the _i_. Can you tell me why?

S: Because it was just after the _h_.

T: Okay, I see, after the _i_. Let's look at the rule again. We find two consonants coming together in that word, anyplace between two vowels. Do you find two consonants together coming between two vowels, Steve?

S: No.

T: Look very carefully again.

S: Yes, _m_ and _n_.

T: _m_ and _n_. They come between what vowels?

S: _i_ and _e_.

T: Okay, _i_ and _e_. Now what is the rule? Where do you divide it?

S: ...the consonant...any consonant or the first consonant is divided....(trails off).

T: Let's look back up at the rule where it says divide the word after the first consonant.

S: So there are two vowels you divide the word after the two consonants.

T: No, now watch again, if it has two consonants--you said _m_ and _n_ come between two vowels, the _i_ and _e_--divide the word after the first consonant.

S: So, if the word has two or more consonants between two vowels, you would divide it after the first consonant?

T: After the first consonant, so that would be what letter?

S: i

T: Is i a consonant?

S: I mean after the h.

T: Let me put it on the board here. Let's see if I can help you a little better here on the board. This is our word (writes it and points). Now, you told me that m and n are the two consonants that come between the two vowels, i and e, isn't that what you told me? Now it says divide the word after the first consonant. We are talking about these consonants right here.

S: So you would divide it after the i.

T: Is i a consonant?

S: I mean after the m.

T: After the m, that's right. After the first consonant. Now pronounce it.

S: Chim-ney.

T: Okay, put it together.

S: Chimney.

T: Chimney. That's right.

Discussion

The results of this study support the premise that, with training, teachers can become more explicit in explaining strategic use of reading skills in individual lessons and that, as a result, students become more aware of what strategic process they are learning in that lesson and when and how to use it. Consequently, the study supports a view of instruction that places a premium on direct, explicit explanation to make low-group students aware of how reading skills can be used strategically. Because research on metacognition, comprehension, and the student's role in mediating instruction all point to the importance of strategic awareness, use of direct, explicit explanation is a significant finding. The study results provide strong evidence that students can become more metacognitively aware of how reading skills work and that such awareness is associated with the explicitness of the teacher's verbal explanation of the skill. Consequently, if student metacognitive awareness is a desireable outcome of reading instruction, then teachers are more effective in creating this outcome when verbal explanations are explicit.

However, while student awareness may be an important instructional outcome when developing strategic readers, it is not enough by itself. Measureable gains in reading achievement must also be evident. Central to this study was the premise that the metacognitive awareness generated by explicit explanations would translate into greater student reading-achievement growth as measured by the Gates-McGinitie Reading-Achievement Test. The findings do not support this hypothesis.

Several explanations for the lack of achievement growth can be offered. First, this study may have revealed no relationship between teacher explanation and reading achievement because, as Tharp (1983) suggests, strategic reading cannot be directly taught. While such a conclusion must be considered, other circumstances peculiar to this and to other long-term instructional studies may also explain the lack of significant achievement growth.

The first is that the treatment teachers may not have consistently used explicit explanations in their routine teaching. In fact, interviews conducted with the treatment teachers at the end of this study suggests that explicit explanation of reading strategies is difficult for many teachers, and that they tended to use it most on the days they were observed. As a result, explicit explanations were not provided across all lessons and, therefore, students had little opportunity to build a longitudinal sense of how to apply strategies consistently in a variety of text, despite their awareness at the end of the observed lessons.

Second, teachers may not have adequately prepared students for application of the skills. Close post hoc examination of the lesson transcripts of the treatment teachers suggests that, while they became increasingly more proficient in explicitly explaining to students how skills work as strategies, they often failed to provide students with explicit opportunities to apply the skills strategically in the context of real text. Thus, while students may have been taught how to think strategically about skills, they may not have been provided with sufficient opportunities to link their strategic knowledge to the reading they do in textbooks, on tests, in library books or other forms of "real reading."

Third, it became apparent during the study that, while most treatment teachers could develop expository informational statements about skills, they were less successful with the more subtle aspects of explanation. For instance, they had difficulty conceptualizing skills as strategies and, as a result, had difficulty translating some skill lessons into strategy lessons. In addition, they had difficulty focusing on the mental processing rather than the answer, on where the strategy would be applied in real reading, on the salient features to highlight, and on how to respond to students appropriately during the interactive phase of the lesson. Consequently, while the treatment teachers received high ratings for their explanations, they nevertheless had difficulty with the subtler aspects of the technique which, in turn, may have influenced student achievement. Similarly, examination of teacher transcripts reveal that teachers had difficulty in providing a meaningful rationale for teaching reading skills, in explaining skills as strategies rather than as rules to be memorized, and in maintaining a focus on the strategy rather than on the semantic meaning of the selection.

Fourth, the qualitative findings suggest that instructional effectiveness involves more than we had previously thought. When student metacognitive response to text processing is a desired instructional outcome, it is not enough to provide a single unitary explanation. Effective instruction is also associated with qualitative characteristics of teacher instructional talk, including (a) an emphasis on assistance rather than procedure and/or assessment; (b) an emphasis on "knowing how you know", (c) a conscious building of connections with past and future learnings rather than teaching each lesson as a separate entity; (d) an emphasis on the situational context to which the learning will be applied; (e) an attempt to make visible the invisible mental processing that goes on in the mind; and (f) an effort to respond to student confusion with spontaneous elaboration about how to think strategically to complete the task.

Fifth, the standardized test used to measure achievement may not have assessed the strategic outcomes being emphasized. While the Gates-McGinitie Reading Achievement Test is a recognized reading measure, it may be too global to be sensitive to student strategic behavior when reading.

Sixth, standardized tests may not be an appropriate measure to use in an intervention study because it is most sensitive to aptitude and less sensitive to instructional interventions (Paris, 1984). Consequently, rather than using a standardized test to measure achievement outcomes, it may be wiser to use criterion measures of students' strategic responses to text.

Finally, the experiment may not have been long enough. For low-group students who are reading from one to three years below their peers, translating awareness of how individual strategies work to independent and self-regulated application may take longer than the five months encompassed by this study, especially considering the concerns noted above. Similarly, for low group students to operationalize the reading skills in concert with generic reading tasks such as those required on a standardized reading achievement test might take longer than this study allowed.

Conclusion

Research on metacognition and on reading comprehension research emphasizes the strategic role of the reader in processing text. To date, there is little knowledge about the instruction needed to develop such strategic outcomes. Studies that identify instructional practices that produce strategic outcomes are an important next step in translating research on metacognition and reading comprehension into instructional pratice.

However, the continued pursuit of this line of research must account for achievement as well as awareness. Future studies of direct teacher explanation must insure that experimental group teachers use the treatment consistently, that achievement measures sensitive to strategic reading behaviors be used, that interventions with teachers focus on more explicitly on the subtle aspects of explaining strategic processes to students, and that the study be long enough to give low group students the opportunity to internalize the strategies being taught.

The fact that effective instruction involves subtle qualitative dimensions of instructional talk and that these dimensions are difficult for even effective teachers to implement has implications for teacher effectiveness research and for teacher education. Regarding teacher effectiveness, results such as these reinforce the emerging findings regarding the importance of the teacher's role as a presenter of conceptual and pedagogical information, as opposed to a manager who simply sets pupils on tasks associated with instructional material. In short, teacher talk may play a significant role in promoting greater metacognitive awareness in students. Regarding teacher education, results such as these emphasize the importance of helping prospective and in-service teachers develop the conceptual and pedagogical expertise needed to make instructional decisions regarding (1) reading strategies and (2) their own instructional talk when presenting these strategies to students.

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Appendix A
Management Observation Form and Directions for Use

Management Observation Form

No. of students in class_____ (Whole class activity)
No. of students in reading group(s) (1____2____3____)
in rest of class_____

Observer code 3
Classroom code 17
Date 2-8-83

I. Whole Class

	Time	On	Off	Can't Tell
1				
2				
3				
4				
5				
6				

Reading Group

	Time	On	Off	Can't Tell
1				
2				
3				
4				
5				
6				

Ob. time start_____
Ob. time end_____
List interferences_____
& # of min._____

Nonverbal Interactions (Tally)			Verbal Interactions (Tally)		
Physically restrains	Reading Group	Whole Class	Call name out of lesson context	Reading Group	Whole Class
Physically punishes			Tells student to stop inappropriate behavior		
Brief Silent waiting			Tells student appropriate behavior		
Prolonged silent writing			Uses positive comments to control students		
Brief glare at student			Cites rules or Procedures		
Long glare at student			Threatens Student or Warns Student		
Signal Interferences			Ridicule; Sarcasm		
Proximity-relationship control			Stops lesson (more than 3 sec.)		
Takes object from student			Stops Lessons and removes student		
Others			Rebukes student for not participating		
			Shouts for order		
			Whining Tones		
			Voice Squeaks		

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III.

Environment and Materials: ____ not observed

____ 1. Teacher & pupil space defined and used appropriately
____ 2. Some errors in use of space materials, equipment
____ 3. Materials not ready, traffic pattern problems, teacher unable to monitor room, environment detracts from smooth functioning

Supporting data

Organization and Clarity of Instruction ____ not observed

____ 1. Students at various levels clear about directions, tasks, outcomes
____ 2. Some students unclear about directions, task, outcomes (5 or more students to appl
____ 3. Evidence of lack of student clarity about directions, tasks, outcomes

Supporting data

Rules and Procedures ____ not observed

____ 1. Pupils efficiently carry out routines and procedures
____ 2. Mixed efficient use of routines
____ 3. Pupils do not use routines and procedures

Supporting data

Consequences to Pupils ____ not observed

____ 1. Reward/deterent system focused on positive
____ 2. Reward and deterent pattern not observable
____ 3. Reward/deterent system used and heavy punishment

Supporting data

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Monitoring ____ not observed

___ 1. Teacher monitored class and responded to cues of future problems

___ 2. Teacher unsystematically monitored class and unsystematically responded to problem and cues

___ 3. Teacher responded to problems not to cues of problems

Supporting data

Student Accountability ____ not observed

___ 1. Time and product identified

___ 2. Time product communication not adhered to

___ 3. No product and vague time

Supporting data

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DIRECTIONS FOR USING

MANAGEMENT OBSERVATION FORM

This form is to be used for a 60-minute observation.

Observed time:

Does not include recess other events that removes the students from room

Does include activity transitions

1. After arrival in classroom, ask teacher where best place for you to sit in (otherwise select place at back of classroom that won't interfere with routine of class).

2. First, count total students and record.
Second, record time observation begins.

3. Section I: Time on task record

   A. Record time at 10 minute intervals of observed time

   B. Time-on-task criteria

      1. For each internal in each box record number of students on, off or can't tell (this should total to number of students in class. If student(s) have left class for another class, each time they would be recorded in 'can't tell.')

      2. ON: Student(s) participating actively in an instructional activity (e.g., doing worksheet, reading book, obviously listening to teacher.

      3. OFF: Should be obvious -- doing something other than instructional activity (e.g. pencil sharpening, talking to neighbor; selfdistraction, etc.)

      4. CAN'T TELL: If student(s) participation cannot be obviously determined (e.g. while teacher gives directions you can't tell if student looking out window is "on task" listening).

   C. Record the off task students first as they should be most obvious. Then count on task. Remainder would be your can't tell.

4. Section II: Interaction Record - teacher with whole class or any group.

   A. Use tally marks to record each instance teacher is observed using behavior that fits a descriptor listed.

   B. OTHER - A teacher might have a ideosynciatic behavior that is repeatedly used which is not listed for either column. Write a brief description of the behavior and then tally occurrance.

   C. If a reading group is in progress, tally occurrances in first column for each interaction - section.

   D. Whole class means portion of class not engaged in a reading group. The actual student make-up may change as groups switch in course and hour. Systemizing survey class (e.g., now by row or by tables)

   E. Descriptions of Non Verbal Ineraction Categories

      1. Physically restrains - arm on student, holds down in seat, hand on book student is holding.

      2. Physically punishes - spanking; slapping, shaking

      3. Brief silent waiting for order - less than 5 seconds of silence by slow count

      4. Prolonged silent waiting - 5 seconds or longer by slow count

      5. Brief glare at student - 'dirty' look lasting less than 3 seconds focused on a particular student

      6. Long glare at student - 'dirty' look lasting 3 seconds or longer focused on a particular student

      7. Signal interference: clicks fingers; flips lights on and off; raised hand for order; claps - to control

      8. Proximity - relationship control - walking around room from stationary position (may vary); walks over to particular student and stands (no physical contact or verbal remark) to control

      9. Takes object from student - removes pencil, paper, gum, or other object student is holding or working with to control

   F. Descriptions of Verbal Interaction Categories

      1. Calls name out of lesson context - names student without further verbage to control

2. Tells student to stop inappropriate behavior -should tally remarks that may or may not be followed by description of appropriate behavior

3. Tells student appropriate behavior-may or may not follow telling student to stop inappropraite behavior.

4. Uses positive comments to control students-example: "I like the way you're;" "It looks like you've been working hard;" if directed to individual, determine if they're in reading group or part of whole class to tally

5. Cites rules or procedures-specific rules or refers to rules in general; may be indirect reference to a list students received.

6. Threatens student - very negative

7. Warns students if . . . then . . .

8. Stops lesson (for longer than 3 seconds by slow count - may accompany another nonverbal or verbal category

9. Stops lesson and removes student - sends out of room; to a "time-out" location in classroom; sends back to seat from group.

10. Rebukes student for not participating - tells student to pay attention, may follow calling on student for an answer which they don't give.

11. Shouts for order - tally will probably accompany another verbal interaction.

12. Whining tones - tally will probably accompany another verbal interaction.

5. Section III: Guideline Questions for Observation Notes in Supporting Data

Teacher Explanation Project

Upon completion of observation, rate the classroom in each category (1-3 or not observed), based on overall impression. In addition checking one of the descriptions provided in each category of Section III of the observation form, you will be giving examples to support your rating. These questions will help you structure your notes and examples.

Your supporting data should include the following types of information in guidelines in each category. Additional paper has been attached. The blank sheet is for the floor plan of classroom. Student names are not necessary. The lined paper is for continuation of rates from any category. Be sure to reference notes on pages to category they should be included in.

When your observation is completed and/or after you leave the teacher's classroom, go over guideline questions and add any additional information to your notes that may not have been accounted for in your notes.

1.0 Environment and Materials

1.1 What was the room arrangement? Attach a floor plan with student seating chart. If teacher has one ask to copy it.

1.2 Describe the overall appearance or ambience of the room.

1.3 Did any problems arise that could be attributed to traffic patterns, student access to important areas of the room, or teacher's inability to see all student work areas from her station in the room.

1.4 Describe any aspect of room arrangement, contents, or decoration which appeared to distract students from their tasks or detract from the smooth functioning of the room.

1.5 Were there adequate numbers of desks, chairs, equipment, and supplies for the day's activities?

1.6 Use of small groups
Describe the seating of the students in the small group, the teacher and the out-of-group students with respect to each other.

2.0 Organization and Clarity of Instruction

2.1 What was the format of all class activities: whole group, small group, or individualized?

2.2 When the use and/or effect of materials fell short of the ideal, what factor(s) contributed to the problem? Please be very specific, and indicate what factors mentioned were beyond the teacher's control.

2.3 What evidence was there that instruction was or was not at appropriate levels for all students in the class?

2.4 What did the teacher do to accommodate needs of the slowest or fastest students in the class?

2.5 What did students do if they finished their class assignments early?

2.6 Describe any use of centers or stations. Include any instructions for their use given by the teacher.

2.7 What were rules and procedures for use of a center or station? Are they posted? Were rules and procedures followed?

2.8 During class discussions or recitations what portion of the students were actively participating? What did the teacher do to assure full participation?

2.9 Did the teacher, use vocabulary, speaking style, and pace that facilitated students' understanding? What evidence was there that instruction was or was not clear to the students?

2.10 What visual reinforcement was provided during teacher presentations?

2.11 Describe (quoting where appropriate) any aspect of the teacher's instruction or verbal expression which contributed to poor clarity in this lesson.

2.12 How did the teacher indicate the end of an activity and the need for a transition?

2.13 How much advance notice was given to the students so that they could start to finish up their work and put away materials?

2.14 Did the teacher leave the small group to deal with something in the rest of the room? What did the students in the group do when this occurred?

2.15 When the teacher interrupted himself or herself to deal with something out-of-group, what were the reasons?

2.16 What happened if out-of-group students needed help while the teacher was with the small group? If they were delayed, how long was it before they got help?

2.17 What did the teacher do when students approached him or her while teaching the small group? Was there a consistent response?

2.18 Use of individualized program (SRA, Skill Box, Contracts)

a. Did the teacher decide exactly what students would do for individual work, or was there student choice of assignments.

b. If student choice, describe what happened.

c. If the teacher had decided, how did the students know what they were supposed to do?

2.19 Flow of instruction

a. What interrupted the flow of activity and/or required the teacher's attention unexpectedly? Be very specific and describe any factors which were outside the teacher's control. Specify source as internal or external to classroom.

b. For each of the interruptions, describe the teacher's response.

c. What was the result of the teacher's response for the majority of the class? What did students do while the teacher was dealing with the interruption?

d. Describe any other constraints the teacher had to deal with: environmental factors such as heat, noise from outside the room, a student with an unusual handicap, etc.

3.0 Rules and Procedures

3.1 What procedures were in effect during the activities? Include cues, routines, planned policies for teacher contacts, use of classroom resources, etc.

3.2 For each procedures, describe its functioning: How well did it accomplish the purpose of getting routine activities accomplished efficiently?

3.3 Did the teacher seem to have a system for contacting students? If there was no apparent system, how would you describe his/her manner of selecting students for interactions?

3.4 What procedures were in effect regarding the use of materials? Include anything about getting it out, using it in an activity, and putting it up.

3.5 Did any problems arise that could be attributed to inadequate procedures or guidelines for use of pencil sharpener, fountain, bathroom, centers, supply areas, or other areas of the room? Describe.

3.6 What rules or reminders of procedures were posted in the room?

3.7 What rules were cited by the teacher or overtly enforced?

3.8 What morning and end-of-day routines or rituals (warmups and winddowns) were used? (if applicable)

3.9 How well were rule(s) followed that day? When someone did nor did not follow a rule, what did the teacher do?

3.10 Were procedures and roles established as the result of problems or were they presented as a matter of course before any problems arose?

3.11 Were the consequences of not following specific rules or procedures discussed?

3.12 Did the teacher remind the students about any rules or procedures, and/or re-explain any? What happened before this reminder or reexplanation?

4.0 Consequences to Pupils

4.1 What were the teacher's instructions to the class (and/or the policy in force) regarding student behavior in the group, out of the group, and in transition from group to group? Were instruction/policy clear? Were they followed?

4.2 If a student (or students) were disruptive, overtly uncooperative or unmanageable, describe the event or confrontation in detail. What did the teacher say and do? What were antecedent and resulting events?

4.3 How did the teacher reward students for appropriate behavior?

4.4 What punishments or deterants did the teacher use of discuss?

4.5 Was the teacher consistent in use of the reward/deterant system?

4.6 What were students' reactions to rewards and penalties given during the class? Were deterants effective in changing inappropriate behavior?

4.7 Did the rewards and deterants used seem to be reasonable and appropriate in terms of teacher effort and in relation to magnitude and nature of rule violations?

4.8 Was the teacher consistent in his or her response to misbehavior? Did the teacher stop the behavior quickly?

5.0 Monitoring

5.1 In general, how aware was this teacher of everything going on in the class?

5.2 Did the teacher have a clear view of all students from the teacher's usual work stations?

5.3 Did the teacher ever leave the room? How often and for how long?

5.4 What violations of already established rules or procedures occurred that were not responded to by the teacher? That were not observed by the teacher?

5.5 What other behaviors occurred which were not responded to be the teacher but which struck you as inappropriate for the classroom?

5.6 How did the students indicate that they needed help? How efficient was the teacher at spotting students who needed help, remembering them, and responding?

5.7 Did the teacher seem to be monitoring the rest of the class when working with a small group or individual? How?

5.8 How well did the teacher monitor to see that students were complying with the instructions while and immediately after they were given?

6.0 Student Accountability

6.1 For each activity engaged in by the students, was there a product or assignment that reflected what the student had done during the time? Describe.

6.2 Describe the system used for turning in work. What did students do with their work when they finished it?

6.3 If there was not an assignment turned in, how did the teacher find out what the student had done during that period of time?

6.4 Cite any evidence you can about the quality or quantity of feedback from the teacher about academics: Were any graded papers returned? Were they discussed? What positive reinforcement was used for good work?

6.5 What was the teacher's response to students who did not complete or did not hand in assignments? To what degree did the teacher emphasize the importance of completing assignments, on time and correctly? Describe what the teacher said or did.

6.6 What evidence was there that students did or did not understand instructions for assignments?

6.7 How did the teacher introduce, explain, or otherwise communicate assignments to the class?

Appendix B

Initial Set of Training Materials Used with the Experimental Group

I. Welcome

- Thank you to teachers
- Intro researchers
    - Cass
    - Roy
    - Linda
- Thank you administrators
    - Chamberlain
    - Halik
    - Letts
    - Washington
    - principals - Marsh Richardson

II. Announcements

A. Pretest scores will be available in 2 weeks. Results will be mailed. If teacher wants more information, call 353-8763. Linda Vavrus will make arrangements to provide more information.

B. In May we will arrange for a time to share the results of the study and classrooms application of the findings. PGP credit.

III. Dr. Chamberlain

IV. Announce 2 groups

Control

Cass

I. Check names

II. Explanation of Study

Include:

- A. observations 4
    - 1. researcher will be assigned and will contact for obs. times
    - 2. interview 5 students selected randomly
- B. Control - don't share info
- C. improved reading instruction by improving management

III. Linda Anderson

IV. Questions and concerns - Cass

permission slips

Treatment

I. Intervention

observations - 4 times

5 students to interview

researcher assigned for observation

questions and concerns - call researcher who will be assigned

2 interviews

Intervention #1

Teacher Explanation Study
November 3, 1982

I. Background

Research conducted in the past ten years has established that effective reading teachers are those who foster more student involvement in learning tasks. These teachers use routines and manage efficiently; they monitor pupil responses; they provide appropriate feedback; and they cover much material in the basal textbook. In short, the teachers who produce the most reading achievement are those who keep their students' academically focused and attentive. This style of instruction has been called "direct instruction."

While direct instruction is associated with achievement gains, recent classroom research points out that such teaching is often mechanical. Results indicate that, all too often, teachers are simply monitoring students through workbooks, dittos and basal selections without providing any assistance about when to use the information that was learned or how to do it. They ask questions; they give procedural directions; they listen to students give answers; and they provide feedback to these answers but they do not provide explanations about why a skill is important, when it should be used, the problem it will solve or the thinking which must be done when using the skill. Note, for instance, the absence of teacher explanation regarding how to do main idea thinking in the following classroom excerpt. The teacher had begun a lesson on main idea. A paragraph had been read aloud and students were asked to choose the best title.

Teacher: Alright, now here are some possibilities. A trip downtown. The new shirt. The shirt that didn't fit. Let me read them again. A trip downtown. The new shirt. The shirt that didn't fit. Now those three possibilities, which one would go best? Angela ?

Student: A trip downtown.

S: A trip downtown.

T: OK, Troy, what do you think?

S: The new shirt.

T: David, what was your choice?

S: The new shirt.

T: Suzanne, how about you?

S: The new shirt.

T: I think the girls decided on the trip downtown and the boys liked the new shirt. Mainly, what was the story about?

S: A trip downtown.

S: Getting a new shirt.

Although some students are able to learn by responding to questions, we have found that the absence of explanation in direct instruction seems to be most detrimental to low group readers who are slower to grasp the meaning and purpose of the task. These findings have led us to hypothesize that teachers who provide explicit explanation of what is being learned will be more effective in producing reading achievement growth among low readers than teachers who simply keep them on task. To begin to test this hypothesis, we conducted a pilot study last year in which we analyzed lessons where teachers used the basal with explanation. We focused on skill instruction, in terms of what it contains and where it is located in the instructional sequence. This study produced several results. First, all the teachers who were able to keep low achieving students on task elicited positive gains in student achievement. However, the teachers who also used explanation were more effective in producing achievement within the low achieving group. Second, there was a relationship between pupil awareness of what was being learned and his/her achievement on reading tests. Third, pupil awareness was associated with the explicitness of the teacher's explanation which in turn, were associated with increases in achievement. In other words, the more specific and explicit the teacher was in explaining, the more aware the students were of what was being learned and the better the reading achievement test outcomes were. Finally, the most successful teachers were those who tried to make students consciously aware of how to apply skills when reading; the lesson successful teachers were interested only in getting students to give the correct answers.

We concluded from this study that our basic hypothesis was strengthened--it seems the teachers who provide explicit explanation while also keeping students actively engaged are more effective than teachers who simply keep students on task. To establish these findings as truly valid, however, it was necessary to replicate the study over a broader and more diversified range of classrooms.

II. The Study

The study in which you are about to participate is a more tightly designed attempt to compare teachers who use explicit explanation with those who do not and the effects of explicit explanation on students awareness and achievement. Twenty-two teachers and their designated low groups are participating. All low groups will be tested at the outset and the teachers will be assigned to the treatment or control group. You are the treatment group. As such, you will receive instruction in how to include explicit explanation in your skill instruction in basal reading programs. You will use what you learn in teaching the low group fore the next twenty weeks. We will observe periodically to ascertain the degree to which explanation is present and the degree of awareness on the part of the designated reading group. The achievement growth of your students will be compared to the growth of those in control classrooms and conclusions about the value of teacher explanation will be formulated.

III. The Training

You will remember that our pilot study tentatively established that teachers who provide explanation are more effective than teachers who simply keep students on task. We also found out what goes into a good explanation. Good explanation starts with the goal of making students consciously aware of how to put skills to work in solving real reading problems. This goal shapes the teacher's verbal communication which contains specific and explicit explanation. When developing conscious awareness of how skills can be used to solve real reading problems, students not only get the right answer but also a better understanding of what they are doing. It is this conscious understanding which allows students to score higher on reading achievement tests than their counter parts who simply go through the materials.

Consequently, there are two keys to good explanation. The first is the teacher's own understanding of how skills work in solving real reading problems and how aware student's currently are of how this process works. The second is the teacher's use of techniques which can be incorporated into basal textbook instruction to make explanations more explicit. We will start with the first key.

A. The Teacher's Goal for Skill Instruction

Think about the recent reading lesson which one of our researchers observed in your room. Think about what the activity was. Then imagine what your students would have said if you had taken each aside and asked:

> What was it you were learning today?
>
> Why is it important or when would you use it?
>
> If you had to teach it to a friend, what would you say?

These are the types of questions the researchers will be asking your students following lessons in order to determine whether instruction has resulted in conscious awareness of how the skill works or just answers. To obtain conscious awareness from students learning to read, teachers themselves must know what students currently think reading skills are for and what reading skills really are for.

To find out what students think, we recommend that you begin asking your students the above three questions yourself on a regular basis following instruction. This will serve three important purposes of:

1. providing you with valuable information about who in your designated group is aware and who is not together with some idea of what the problems are;

2. reminding you to keep focusing on creating conscious awareness of what is being taught rather than simply settling for correct answers; and

3. setting for your students the expectation that you want more from them than mechanically-provided correct responses. You also want them to know what they are doing and when to use it.

Let us provide you with some examples of student's responses to these questions when the teachers had included explanations of how the skill works in solving read reading problems and when they had not.

In the first example the teacher had included an explanation in a lesson "r" controlled words. The students were told they were going to learn how to pronounce words that had either ur er ear or or letter combinations in them. He explained when they would use this skill as follows:

> When you come across a word like this (words containing ur er ear or) and you don't know it, you'll be able to sound out the word recognizing the "ur" sequence--a "r" with an "e" or a "u" right before it. This will help you. You won't get stumped.

He continued by showing them how this skill works.

> Let me show you how this works. Let's say we run across the word burn in your reading. I've never seen this word before. I could look at the word and I could see ur, right? I know it sounds like "er". With the b sound in front and the n sound at the end I have b-ur-n, burn.

He then continued through the lesson giving the students opportunities to try out the skill in a turn taking situation. When they were correct he indicated why they were correct. When they were wrong, he showed them where their thinking was incorrect.

At the end of the lesson the students responded to the interview questions as follows.

Student One

Interviewer: What were you learning to do today?

Student: We were learning about the e-r, the u-r, and the o-r and the e-a-r and they mean the same, they're ur.

I: O.K. Good. How do you use that?

S: Well, you put them in words, you put them in words for like, um, sir. The u-r in fur, in work, w-o-r-k.

I: Why were you learning this?

S: So when we read stories, Mr. B. had us learn it so when we read stories well we can understand words we've never seen before.

I: Fantastic. Thank you.

Student Two

I: What were you learning to do today?

S: I was learning how to sound out words with u-r, e-r, o-r, and e-a-r.

I: Fantastic. How do you do that? How do you sound out those words?

S: Well, you just look at the u-r and you go, like it, say it's curl and you can't figure out, you never hear it before. You look at it and you say you know that that's u-r and you ccuurrll.

I: How will it help you?

S: It helps you to sound out a word that you've never seen before.

Student Three

I: What were you learning to do?

S: I was learning to do the o-r, the u-r, and the e-r and the e-a-r sound.

I: Good. Good. How do you do it, how do you use that sound?

S: Well, they all sound the same.

I: They all sound the same?

S: Like burn has u-r.

I: O.K. So when you are to look at a word that has a u-r in it what would you say to yourself?

S: Um. Then I could sound it out because I would know.

I: Right. You could sound it out. O.K. Why were you learning how to do all this?

S: So we would know if we looked at a word and we didn't know it. Then we would look for those and it would help us sound it out.

I: Very good. Thank you.

In the second example the teacher did not include an explanation of how the skill works in real reading. The lesson was on how to make shorter sentences longer. In the interviews, the students responded as follows.

Student One

Interviewer: Can you tell me what it was you were learning to do today?

Student: How to make sentences better.

I: O.K. And how do you make sentences better?

S: By putting more words to make it better.

I: O.K. and how do you know how to put more words in there? Is there a way to do that?

S: By thinking and you can think up some words that go with the sentence.

I: O.K. Now did your teacher give you any steps to follow as to how to make your sentences bigger and better?

S: Not really.

I: Not really. Oh, so you don't have any steps to follow that she gave you.

S: Not very many.

I: Even if she gave you one or two, can you remember what those are?

S: Um, what is to remember to make it better than three words at least.

I: O.K. and do you remember what you do first to make it better than three words or longer than three words?

S: No.

I: O.K. Let's go back and think for a minute why your teacher would be teaching you this.

S: So we can write stories better.

I: O.K. and how would what you've learned today help you write stories better?

S: By putting more words in a sentence.

I: O.K. and how will that help make your stories better?

S: It will make them longer and will be telling something about another person.

Student Two

I: What did you learn today?

S: We learned how to make a short sentence a little longer.

I: O.K. And how do you make a short sentence a little longer?

S: Well, you add a couple more words that you think would sound good with the sentence and then you have a longer sentence.

I: O.K., that's good. Did the teacher give you some steps to follow when you were doing that?

S: What do you mean like steps?

I: Well, like when she was teaching you how to make short sentences into longer sentences, did she give you some steps to follow?

S: How to do it?

I: Um hum.

S: Like you could circle and underline.

I: O.K. Once you have the word circled or underlined then what do you do?

S: Then you add some words and that makes a longer sentence.

I: Good, now do you remember which words it was in the sentence that you would circle or underline? So that you would know what to add to?

S: Well, like the person and the things he did.

I: Now let me ask you one more question about all this. Whey do you suppose your teacher was teaching this to you? What good is this to you?

S: So that we could be better writers.

I: O.K. That's very good.

Student Three

I: In the lesson I saw you in today, what was it you were learning to do?

S: We were learning how to make big words out of little ones.

I: Big words out of little ones?

S: Um hum.

I: O.K., were you also working with sentences?

S: Yes.

I: What were you doing with the sentences?

S: Making them bigger.

I: O.K. Now can you remember how your teacher told you to make those sentences bigger?

S: Use the "consodants."

I: The consodants?

S: Yeah.

I: What do you do with the consodants?

S: Well it might be a different word, I forgot the words.

I: O.K. What do you try to do then when you find those words?

S: Sometimes we circle them or underline them and sometimes we don't.

I: O.K. Once you've got them circled or underlined, if you do do that, then what do you do?

S: Make bigger sentences.

I: O.K. And how to those words that you circle or underline help you make bigger sentences?

C: Because they are consodants.

As seen in the students' responses to the interview question, it is possible to determine who in the group is aware or not aware of the problem solving aspects of the skill. In addition, these student responses did reflect the explanations: when explanations are clear and explicit, student awareness is very high. Likewise, when explanation is low, student awareness is low.

At first, the asking of these questions may be difficult. It is yet another procedure to add to your busy activity schedule. However, we feel it is an important addition. With teacher manuals and scanty of time, it is easy to become mechanical in reading instruction. The asking of these questions will assist you in not becoming mechanical.

What do students need to answer such questions well? What do you tell them about skills? The most successful skill teachers are those who teach students that skills are problem solving strategies. Tell you students that when they read along normally and are having no difficulty, they do not need to be consciously aware of the skills they are using. However, when they encounter a blockage (such as not knowing a word or not understanding the message), use of a particular skill can help remove the blockage. Therefore, tell your students that when they encounter a problem in their reading they should:

1. consciously determine that they do have a problem
2. consciously search their repetoire of skills to determine what skill could be helpful here
3. apply the skill to solve the problem
4. evaluate whether the problem has not been resolved.

Let's see how this works. Let's say that I am reading the following on page 25 of my Houghton-Mifflin Kaleidoscope:

> Tommy felt sure that the bay would win the blue ribbon. He thought that its reddish-brown coat and black tail made it the most beautiful animal in the horse show.

I am reading along smoothly until I come to the word bay. I can pronounce the word but it doesn't make sense to me in the sentence. I have completed Step 1: I realize I have a problem. Now I go to Step 2: I consciously search my mind for something that might help me figure out the meaning of this word. I remember that I have been taught to figure out unknown words by looking around the unknown word for clues to the meaning. So I go to Step 3: I read on, looking for clues to the meaning of bay. The words "blue ribbon" in sentence 1 are somewhat helpful but not totally. "Reddish-brown coat" and "Black tail" also help. It is not until I get to the last line, however, that I am sure that a bay is a kind of horse. Now I am at Step 4: my evaluation indicates that I have resolved the problem because now I can reread the passage and make sense out of it.

In summary, when we say the teacher's goal is to make students consciously aware of how skills work in solving real reading problems, the above is an example of what we mean. We are not as concerned with the students' answers on workbook pages or dittos as we are their ability to use the above four steps to put skills to work in making sense out of reading.

How do you as teachers develop this goal in pupils? First, you do not teach all the skills suggested in the teacher's edition. Instead you select the ones that are most important to teach. How do you decide which is most important? By deciding whether the skill provides a strategy for helping children solve a problem frequently encountered while reading real books. By making this decision, you are helping children learn to read better because they will soon come to understand that all the skills being taught have a sensible use in making it easier to make sense out of reading. Because what they learn is useful, they learn it better and faster.

Once you have decided upon the skill, you need to know what help you can expect from basal textbooks and what you will have to supply on your own. To illustrate, look at a typical workbook page 8 of the skills handbook accompanying The Sun That Warms. The activity is the interpretation of a pronunciation key in a dictionary or glossary. Note that in the introduction at the top of the page there is no reference to how this skill solves a problem. In fact, there is no reference to how pronunciation keys would ever by useful, when they might be used or why it is important to learn them. When you look to the teacher's guide of the basal itself (thinking that the explanation of the skills's utility might be there), you find no reference to glossaries or dictionaries at all. Consequently, if this page is simply assigned to be done as is, low group students might not have any conscious awareness of how the skill of interpreting pronunciation keys is useful in solving real reading problems. They would simply go through it, trying to get the right answers but not being consciously aware of how or where or when they would use it again. In terms of our three pupil interview questions, they would probably show little awareness.

Could this workbook page be adjusted to include conscious awareness of the skill as a problem solving device? We think so. The teacher would preface the workbook page exercise with a statement such as the following:

> Let's pretend I am reading a book and I run into a really hard word I have never seen before. I can't begin to sound it out. Now that's a problem. How can I find out what it is? I can ask someone else, but no one else is around. So I go to the dictionary and look it up. But when I find it, the pronunciation is shown with strange letters, like these: di nam' ik. We're going to learn today what we can use to solve this problem. It is called the pronunciation key. When we get done, you will be able to use the pronunciation key in dictionaries to pronounce the unknown words you have to look up.

If this statement (or one like it) was inserted at the beginning, would students demonstrate more awareness in answering these three questions?

> What is it you were learning today?
> Why is it important or when should you use it?
> If you have to teach it to a friend, what would you say?

Did you have such a statement at the beginning of the recent lesson we observed? If you had, might the pupils be more aware? We think they would and that, as a result, they not only would demonstrate more reading achievement growth on tests but would also be better prepared to use pronunciation keys when coming to a pronunication problem in their reading. Such results make worthwhile the extra effort involved in prefacing the workbook page with such a statement.

Let's try another example. This is taken from page 39-40 of the teacher's edition of Ginn's The Sun That Warms. The lesson focuses on decoding words with the suffix ous. Note the directions to teachers. There is no explicit reference here to the fact that the ous helps readers solve any kind of problem, no explanation of why the skill is important or when to use it and no illustration of when one might use it. Instead, the ous seems to be taught here as if it was a valuable piece of knowledge in its own right, rather than a strategy useful in decoding words. Consequently, if teachers followed the basal directions faithfully, what do you predict would be low group pupil responses to the three interview questions? We predict little awareness, particularly regarding why the skill is important or when it would be used.

Could we insert a statement early in the lesson which presents the skill as a problem solving strategy? We think so. Here's how we decide what to say in that statement.

> First, we ask ourselves, "What problem would a reader have if he/she was going to use this skill?" (Answer: the reader has encountered an unknown word ending in ous.)
>
> Second, we ask ourselves, "In what situation is this skill likely to be useful?" (Answer: whenever the reader is reading material containing unknown ous words).
>
> Third, we ask ourselves, "Do the pupils already possess similar skills which this one can be associated with?" (Answer: Yes. The pupils have been taught other suffixes in the past and so this is an addition to a repetoir of skills for figuring out unknown words.)
>
> Fourth, we decide on what the ultimate outcome of instruction should be. (Answer: when the reader encounters an unknown ous word in his real reading, as opposed to the workbook page, he will be better able to identify it.)

Using the answers to these questions, we formulate the following statement (or one like it):

> Let's say that you are reading in your library book and you come to a word like this: marvelous. You don't know the word and you can't make sense of the story until you figure it out. What I'm going to teach you today is to use what we have learned about other suffixes to figure out words like this one that end with ous. When we are done, you will know how to figure out hard words ending with ous when you meet these in the books you are reading.

Do you think that an opening statement such as this one, when added to the other basal text suggestions, will help pupils answer the interview questions with more awareness? We think so.

Now. let's try one together. Look at the directions to teachers from page 47-48 of Houghton Mifflin's Kaleidoscope. First read the directions and see what they say to do. (pause)

Second, ask yourself the above questions about the skill taught here (syllables and vowel sounds). What problems would the reader have which would call for the use of this strategy? In what situation would it be useful? Do the pupils already have a repetoir of skills for handling similar problems to which this skill can be added? What is it you hope the student will ultimately be able to do with the skill? (pause)

Third, use the answers to these questions plus whatever help is provided by the teacher's guide to structure an opening statement to precede the one provided by the basal text. (pause)

Now let's share our opening statements and determine (1) whether information regarding the above four questions are included and (2) whether pupil answers to the what, when and how interview questions would demonstrate more awareness after hearing the new opening than if the opening used in the basal was employed.

Now it is time to apply what you have learned to the lesson plan to teach from your own basal in the near future. Before you do that, however, let us ask you the three interview questions to see how aware you are of what has been learned.

What did you learn here?

Why is it important or when will it be useful?

How do you do it?

B. Technique for Explaining How Skills Work

Once you have decided upon the skill to teach and how to make pupils aware of how the skill is a strategy for solving problems encountered in reading, you must explain this to pupils in specific and explicit ways. There are several techniques useful here, most of which will have to be saved until next time. However, we do want to give you two today.

We have already discussed the first technique. Explanation requires that students be provided with explicit statements of what they are learning and why or when it is useful. This is what we just finished. Consequently, you have already mastered the first step in explicit explanation.

The second technique requires a re-ordering of the sequence in which basal lessons are typically taught. Let's examine this sequence. For Ginn's The Sun That Warms, for instance, the teacher's edition for the first selection (page 34-42 of TE) says the sequence for teaching the selection is:

I. Preparation for reading
    A. introducing vocabulary

  - B. setting a purpose for reading
- II. Discussing the selection and questions
  - A. Discussing reading purposes
  - B. discussing strong questions: Thinking It Over
  - C. discussing strong questions: Thoughts At Work
- III. Related Language Activities
  - A. dramatizing the story
  - B. developing good listening skills
- IV. Supplementary Materials
- V. Developing Reading Skills
  - A. decoding activity
  - B. comprehension activity
  - C. creative activity
  - D. study skills activity
- VI. Adjusting to individual needs
  - A. decoding activity 1
  - B. decoding activity 2
  - C. comprehension activity
  - D. language activity

Note where skill instruction occurs relative to reading the selection. The story is read first; then the skills are taught (in apparent isolation form their use in solving problems when reading real selections).

Let's examine the sequence for Houghton Mifflin's Kaleidoscope. It goes as follows for Teaching Unit 1 in The First Magazine (pages 41-52 of TE).

I. Preparing for Reading

II. Reading and discussing
   A. Silent reading
   B. Discussion
III. Teaching Reading Skills
   A. Decoding Skills
   B. Comprehension Skills
   C. Literary Skills
   D. Workbook Assignment
IV. Meeting Individual; Needs
   A. Teacher-directed practice
      1. decoding skills
      2. comprehension skills
   B. Independent practice
   C. Enriching language experiences

As with Ginn's basal, Kaleidoscope puts skill instruction after the reading of the story. In fact, the isolation of skills from use in solving problems in real reading is even more obvious in Houghton Mifflin because they follow Teaching Unit 1 with still more isolated skill instruction in Reading Skill Lesson 1 (pages 53-56 of TE).

The problem here is that children have difficulty understanding that skills can solve problems encountered in real reading if, during instruction, the skills are isolated from real reading. We often take for granted that children know how to make the links between skills they learn and real reading. Low achievers, however, often do not make these linkages unless we make sure they do. Consequently, we are recommending that the basal text sequence be re-ordered so that the skill is taught first and then it is used to solve a problem encountered in the story. This is part of explicit explanation because, by re-ordering in this way, you are telling students that you expect the skill you teach to be immediately useful in real text. As such, you are making the students aware of the linkage between the skills taught and their use in solving problems encountered in real reading.

Let us show you how this re-ordering words. Go back to Figure 4 in which Ginn provides suggestions for teaching students to decode words ending in ous. Once we have decided this is an important skill to teach (because it helps chidlren solve a problem they frequently meet in their reading of real books), we move it out of its present place in the basal text suggestions and make it the first thing we do in the lesson. This allows us to add a statement such as the following to our opening statement for the lesson (see page 19):

> For instance, in the story we are going to read next in The Sun That Warms, there are three hard words that end in ous which we will figure out using what I teach you here.

Now look again at the statement you wrote to precede the lesson on syllables in Kaleidoscope. If you were to re-order the basal text sequence and teach the syllable lesson before having students read the story, could you add a sentence to your opening statement like the one we added to the ous lesson? Try it and see.

IV. Conclusion to Intervention 1

Here's what we hope you have learned today and what we hope you will apply to the reading instruction in the low group beginning tomorrow.

1. start immediately the procedure of expecting students to articulate for you what they learned, when it is to be used and how to use it.
2. when deciding what skill to teach, select ones that provide a strategy for helping students solve a problem frequently encountered while reading real books, stories or other reading material.
3. provide an opening statement to skill lessons which specifies what problem would be solved using the skill, when it would be useful, how it fits with other skills already learned, and how you want them to use the skill in real reading.
4. teach the skill before teaching the story so that the skills used in solving problems can be used in the story.

Next time, we will supply you with additional techniques to ensure that your explanation of the skill communicates to students.

Intervention #2
Teacher Explanation Study
November 1, 1982

I. Introduction

At our last session, we introduced you to the concept of teacher explanation. We argued that good explanation starts with a teacher who sets out to make students consciously aware of how skills work in solving real reading problems and suggested that the desired outcome for student is not only the right answer on tests but also understanding what they are doing when they use a skill to solve a reading problem. To get you started in implementing teacher explanation, we suggested four steps:

1. regularly ask your low group students to answer the questions: what are they learning? why is it important? when it can be used? and how do you use it?
2. when deciding what skill to teach, select those which provide children with strategies for solving problems encountered in reading books.
3. teach the skill before reading the basal selection so the skill can be used while reading the story.
4. introduce skill lessons by telling students explicitly what reading problem can be solved by using the skill, why it is useful, how it fits with other skills already learned and where you expect the skill to be used once it is learned.

We hope that it is also clear to you that the above lesson introduction as well as teacher explanation generally is effective only when teachers themselves understand why the skill is being taught and where it will be useful. Consequently, we strongly urge that the steps for introducing a lesson not be viewed as a script to be followed or as mechanistic procedures to be implemented without variation but, rather, as guiding principles which influences (but do not dictate) what you say to students. It has been our experience that, when true principles are translated into routinized procedures implemented with a minimum of teacher thought, the instruction leads to mechanical student answer-getting rather than awareness of what they are trying to do. Indeed, we urge you to intentionally avoid routinizing this instruction because we believe that the teacher's though and judgment which goes into it is the most important reason why it works.

The avoidance of routinization continues to be important as your instruction moves beyond the introduction. The post-introduction aspect of instruction is presented here in four steps: instructing, restructuring, practice and application.

II. Instructing

We use the term "instructing" to describe what you do to actually place a structure inside student's heads regarding how to do the problem solving associated with the skill. It is the explanation you provide to get students who do not know how to do the skill to a point where they do know how to do the skill.

We have found that the effectiveness of the "instructing" step depends upon (1) whether teachers actually take the time to provide an explanation before assigning turns to see if students can answer questions about the skill; (2) whether teachers themselves have a clear idea of why the skill is being taught and can communicate that reason in the introducing statement of the lesson; (3) whether the teacher has analyzed how one thinks when using the skill to solve a problem in reading and (4) whether the teacher talks about how to do the skill in a way which is clear and explicit. The implications of the first two steps are fairly clear: first, time should be allocated early in skill lessons to teacher talk about how to do the skill and, second, the introductory statement discussed at our last session is the key factor in guiding the teacher's thinking about what to say when "instructing." The implications of the last two are less clear however.

Doing a Task Analysis

The third one--in which the teacher analyzes how a reader uses the skill--is frequently called a "task analysis." In order to teach students how to do a skill teachers themselves must know how to do the skill. While one might assume that all teachers know how to do these skills, it is not necessarily so. In fact, because so many teachers learned to read easily when they were children they sometimes are not conscious of how they themselves actually use the various skills they are trying to teach even though they can always get the right answers on tests. Consequently, they must consciously think about--or analyze--how the skill works and what they must say to students who do not know how to use the skill. This is another place where we often receive questions such as "Isn't there a book or something that tells us the "secret" for doing each skill?" or "If you tell me what to say about a skill, I'll say it." Again, however, there is no such list and, even if there was, teachers who do their own thinking seem to be more effective than teachers who avoid such thinking. We suggest you follow these steps in figuring out how it works:

1. remind yourself that what you are analyzing is how the skill is used to solve problems--not knowledge about the skill (e.g., when teaching Ginn's lesson ous suffixes, the desired outcome is that

students use the ous to decode unknown words, not that they can identify the ous as a suffix.

2. put yourself in the position of one of your low group readers, ask the questions, "What is the sequence the students must follow in order to figure out an unknown word ending in ous? and list the steps (for the lesson on -ous endings, the student must (1) identify the ous ending, (2) separate it from the rest of the word (3) pronounce the first part of the word, (4) pronounce the suffix (5) blend them together into one word and (6) check to see if that word makes sense in the text).

3. from the sequence, identify the key element which is the essence of this problem solving strategy and the secret to using the skill to solve the problem (when teaching the ous suffix, the key element is step #2 -separating the -ous from the root word because this division is the essence of the strategy of using suffixes to solve the problem of unknown words and because the correct pronunciation will not result unless the division is made correctly).

You do a task analysis such as this during planning--before the actual lesson begins. It is most difficult to do it "on the spot" while teaching. Also, you cannot expect basal texts to provide the task analysis for you (although, as we've said before, it is probably better that teachers do their own thinking about the skill even in the event that the teacher's guide did provide such a task analysis). As the first step in "instructing," you should do such an analysis.

Providing Clear, Explicit Explanation

The heart of "instructing" is the teacher's explanation of how the skill works. Clear and explicit explanation results from clear and explicit thinking about what is to be explained. This is why the task analysis is so important.

Once the teacher has analyzed how the skill works, we recommend that a technique called "talking out loud" be used to explain to students how the skill works. It is simply a process in which the teacher models the thinking used when applying the skill. By "talking out loud," the teacher makes visible for students the thinking which is usually invisible. What the teacher says is a direct reflection of the task analysis. For instance, here's what a teacher might say when using "talking out loud" to model for students how to use -ous suffixes to decode unknown words:

> Let's say I am reading in my book and I run into this word (puts humorous on the chalkboard). I have never seen this word so I have a problem. Let's see if I can solve the problem. Here's what I do. First, I ask myself whether the word has an ending I can use to help me. Second, I draw a line to separate the suffix ous from the rest of the word. Third, I pronounce, the first part of the word (says "humor"). Fourth, I pronounce the suffix (says "ous"). Fifth, I pronounce them together (says, "humorous"). Finally, I check to see whether the pronunciation I came up with makes sense in the sentence I was reading.

When doing the "talking out loud," the teacher emphasizes the importance of step #2 by highlighting the division with caulk lines or by simply stating that "This step of dividing the suffix from the rest of the word is the secret to figuring out how to pronounce words which end in -ous."

There are other helpful things to be done while " instructing." For instance, the progression should be logical, the explanation should stay on track and the examples used should be unambigous with exceptions delayed until later. It is our experience, however, that these characteristics of good explanation tend to be present if the teacher is clear about what is being taught and "talks out loud" to students as a means for making visible the invisible mental processing involved in using the skill.

In sum, the "instructing" segment of a good skill lesson will follow the introduction which we talked about last time. The introduction and the instructing occur during the first five minutes of the skill lesson. Following this, regular turn taking can be conducted, practice can be provided and the skill can be used when reading the basal text selection which accompanies the lesson.

Let's try an introduction and an "instructing" section for a new skill. In Figure 1, you find a skill lesson on using context to get meaning taken from pages 25-28 of the published edition of Houghton-Mifflin's *Kaleidoscope*. Houghton-Mifflin's assumption seems to be that students can read this skill lesson on their own and learn the skill. While this may be so with top groups, it is not so with low groups. They need teacher explanation. Using what you learned last time, how would you introduce and "instruct" this lesson? Use the four steps for building an introductory statement as they are presented on page 12 of last week's session and use the steps in doing a task analysis and the "talking out loud" technique as presented here. Check your introduction and "talking out loud" against the ones we prepared and attached as Appendix A at the end of this paper.

III. Re-structuring

By the end of the first five minutes or so of a skill lesson, you have provided an introduction to the lesson and an explanation which features a model of how a good reader thinks when using the skill to solve a problem in reading. During the next ten minutes or so, the teacher monitors the students' responses to opportunities to use the skill by asking teach student to "talk out loud" when using the skill, just as the teacher did in the "instructing" section. The teacher monitors the student's "talking out loud" to make sure they are correctly doing the thinking required to use the skill in solving a reading problem. So, for the lesson on -ous suffixes, the teacher would give each student other words similar to humorous (such as glamorous, furious, etc.) and ask them to "talk out loud" about how they figured out how to pronounce the unknown word. For the lesson on using context, the teacher would give each student other paragraphs having unknown words in them (such as the paragraph with concise in it on page 27) and ask them to "talk out loud" about how they figured out what the unknown word meant. In both cases, the teacher would highlight the key element (or "secret") during three students' initial attempts so that they are aided in attending to the right thing as they do their thinking (e.g., the teacher might draw a line between the root and the suffix in the ous lesson to help students make the division and might underline the clue words in the context paragraph to help them identify clues). As students are given second, third and fourth opportunities to use the skill, however, such aid is gradually withdraw, as is the request for students to "talk out loud." By the end of this ten or fifteen minute segment, students are simply providing answers (e.g., pronouncing words ending in -ous or assigning meaning to unknown words). However, the teacher is assured that the answers are rooted in an understanding of how to do the thinking required to use the skills to solve problems when reading.

This section of the lesson is called "re-structuring" because it is during this time that the teacher gains insight into how the students have re-structured the teacher's explanation to accommodate it to the understandings and strategies already in their heads. You remember that the teacher "instructs" to place a structure inside the students head regarding how to use the skill. However, students are not blank slates. The structure the teacher tried to place in the student's heads come in contact with other structures (understandings, strategies etc.) which the student has gathered from previous experiences. These other structures interact with the teacher's explanation, causing the student to re-structure what the teacher says so that it fits with what is already in her/her head. Depending upon what is already in the student's head, this re-structuring may be good or bad. The explanation may be re-structured so that the student is able to use the skill well or may be re-structured in a way which causes confusion. By having the monitoring session, the teacher can use each student's responses as a "window" on how he/she thinks about using the skill. If looking through this window reveals that the student is confused, the teacher can provide elaborative explanation which places the structure inside the student's head again but, this time, in terms of what is confusing the student.

It is such elaborative explanation during turn-taking that is the teacher's real challenge. It is spontaneous and responsive to individual need and, therefore, requires creative thinking and "on-the-spot" decision-making. It is very hard to do. In fact, it should be stated clearly that, when student responses reveal serious confusion which the teacher doesn't feel can be corrected "on the spot," the best decision is to stop the lesson and re-do it the next day after having time to plan it carefully. Sometimes, however, it is possible to provide appropriate elaborative explanation. Note the following example which occurred during turn-taking following instruction on the use of connector words.

T: Connector words are what, David?

C: Two words put together.

T: What are connector words, Josh?

C: Two words hooked together.

T: They are not two words. Maybe I explained that incorrectly. A connector word is a word that connects one or more ideas. Okay, in this sentence, "They always walk to school together and they always walk home together." Now in this sentence there are two ideas. They always walk to school and they always come home. Of the four connector words I put on the board, which word is connecting the two ideas, David?

C: And.

T: And. Do you see that? And. I have it underlined here. See how it is connecting the ideas of walking to school together and coming home together? It is sort of like a bridge that connects these two. Bridges connect different places, words connect ideas. Connector words connect ideas.

This teacher responded to the misunderstandings of pupils by providing an example, highlighting the role of the connector in the example and supplying an analogy for understanding the function of connectors. It was an elaborative explanation provided when the "window" to student thinking about the skill revealed misunderstanding.

In contrast, note the following exchange during a main idea lesson. The student responses indicate misunderstanding but the teacher does not provide elaborative explanation:

T: Now imagine that you are the author. Can you think of any other title that you would choose?

C: The shell of the sea shore.

T: Alright.

C: Sandy at the sea.

C: The shell at the sea.

C: The pink shell.

T: The pink shell? Think a little bit more. Some times it takes more than (snaps her fingers) like that to come up with an idea. Sit and think a minute.

The ability to provide "on-the-spot" elaborative explanation during turn-taking rests primarily with the teacher's own clarity of thought about the skill being taught. When a student demonstrates misunderstanding, the teacher (1) compares the student's response to the talk analysis of skill, (2) determines where the dissonance is and (3) focuses the elaborative explanation in terms of this dissonance. For instance, in the lesson on connector words, the student responses indicate that student have "re-structured" the teacher's explanation of connectors in terms of what they know about compound words. Consequently, the teacher's elaborative explanation focuses not on words but on ideas and how they are connected. In the main idea lesson, in contrast, the teacher apparently did not do a task analysis of how the main idea skill works, was therefore unable to determine where the dissonance was between student response and how the skill words and could not come up with an elaborative explanation.

In sum, the re-structuring step in teacher explanation occurs immediately after the explanation and "instructing," usually for about ten minutes or so. It includes teacher monitoring of student attempts to use the skill in examples similar to the one demonstrated by the teacher. Initially, "talking out loud" and highlighting of key elements is emphasized but these are gradually diminished. The teacher uses students' responses as a "window" on their thinking and provides elaborative explanation whenever incorrect student responses indicate that they have re-structured the initial teacher explanation in a nonhelpful way.

IV. Practice

Practice occurs when students are provided with materials which require them to repeatedly use a particular skill. Most workbook pages and ditto sheets are designed to serve as practice. Some reading games also qualify as practice. Practice is essential because it helps students solidify what they have learned.

Some recent research indicates that such workbook pages, dittos and games are often assigned to students without prior explanation. Again, this may work with high groups; it does not work with low groups because they need prior explanation. Without explanation, they have nothing to solidify and, because they are confused, they cannot figure out for themselves what they are supposed to learn. Consequently, practice is the fourth step in teacher explanation, not the first.

Other research indicates that workbook pages, dittos and games often give students practice in the wrong thing or in something other than what was taught. An example is a decoding lessons in which students are taught to pronounce unknown words they meet in their reading by looking for common phonogram elements and then substituting different consonants, as in mat, rat, fat, and sat. One would expect that the practice should focus on pronouncing unknown words. However, such is not the case. Instead, they are asked to spell lists of words that are like the word at the head of the list, as in:

set

___

___

___

Similarly, note the practice provided on page 1 of Ginn's Self-Help Activities to accompany The Sun That Warms. You remember that the introduction to the -ous lesson stated that the purpose was to pronounce unknown words that end with -ous. The activity, however, gives practice not in pronouncing unknown words that end in -ous but in making root words into adjectives by adding -ous. It is not that the latter activity is bad. However, it is not what was taught. The practice must require repeated use of the skill taught, not the use of a slight variation of the skill taught.

Let's look at a workbook page from Houghton Mifflin's Kaleidoscope which is designed to accompany the lesson on using context to get meanings. Does this workbook page provide practice in the same thing that was taught in the lesson? If so, it can be used without alteration. If not, the teacher must provide alternative practice material.

Practice is an essential part of instruction. However, to be effective, practice must follow teacher explanation (as provided in an introduction, in "instructing" and in re-structuring) and the practice itself must require the student to use the same problem solving strategy that was taught in the lesson. Obviously, ease of management requires that we use the available workbook pages and dittos as much as possible. However, when there is a clear difference between what was taught and what is on the workbook page or ditto, the teacher must provide alternative practice to insure that students don't get confused at the practice stage.

V. Guided Application

The entire purpose of skill instruction is to provide students with strategies for solving problems encountered while reading text. Therefore, a good teacher explanation includes guidance in using the strategy to solve problems encountered in real text. The workbook pages, dittos and games typically used for practice are not perceived by students to be "real reading." The basal text selection accompanying the lesson, in contrast, is perceived to be "real reading." Consequently, the culmination of the reading lesson comes when the teacher uses the basal text selection to demonstrate to students that they can now solve a problem in reading which they might not have been able to solve previously.

To do this final step in the skill lesson, the teacher must first examine the basal text for places where the skill can be used. If you have taught students how to pronounce unknown words ending in ous, you could search the basal selection to find hard words ending in ous. If you have taught students to use context to figure out the meaning of the unknown words, you would search the basal selection for hard words which are surrounded by good context clues. Hopefully, the basal selections accompanying each lesson will contain at least one or two examples of how the skill you taught can be used as a strategy for solving a problem encountered when reading. For instance, note the sample page from

Kaleidoscope contains underlined words which can be figured out by using context.

The second step in guided application is to insure that student do consciously apply their newly-learned skill when they encounter the potential problem you have identified in the text. Therefore, when introducing the selection, you must not only provide the background and set the purposes for the content of the story but must also set the purpose for using the new skill, one or more of the following suggestions can be used:

1. as part of the introduction of the selection, identify the places in the selection where the skill strategy can be used and set the use of the strategy as one of the purposes for reading the story (reminding students that, when they encounter a problem, they should (1) determine that they do have a problem, (2) search their skills to determine what would be useful, (3) apply the skill to solve the problem and (4) evaluate whether the skill has been resolved.

2. before students read the selection, point out one or two instances in the selection where the skill is called for and have them demonstrate how they will apply the strategy when they get to it.

3. have students read orally a section which includes an example of the type of problem and check to see if the skill is applied to solve the problem.

4. have students read silently a section which includes an example of the type of problem and ask questions afterwards designed to determine whether the problem had been successfully solved.

When students receive direct guidance in applying skills in this way, the instructional cycle is completed. They are told in the introduction that the skill will be useful in solving real problems encountered in reading--now they are shown that, indeed, the skill does solve a real problem in reading.

VI. Conclusion

What we are teaching you is a way to think about teaching reading skills. As we have said before, we do not believe this can be mechanized, routinized or automatized. In fact, we believe that it is the teacher thinking and judgment which makes teacher explanation effective. However, to summarize what we have said in these two sections, the elements of teacher explanation can be displayed as a structure, as following. Perhaps this structure will be useful to you in planning your own teacher explanation.

1. Introduction
    - --specifies problem a reader has if the skill is used.
    - --specifies situation in which the skill is useful
    - --associates this skill with others the student knows
    - --specifies where the skill would ultimately be used
2. Instructing
    - --task analysis
        - a. focuses on the problem to be solved with the skill
        - b. specifies the sequence followed to solve the problem
        - c. identifies the key element (or the "secret") in the sequence.
    - --clear, explicit explanation
        - a. "talking out loud"
        - b. highlighting key elements
3. Re-structuring
    - --monitors student responses to attempts to use the skill
    - --provides highlighted assistance initially and gradually deminishes it.

--provides elaborative explanation as needed by (1) comparing student responses to the task analysis (2) determining where the dissonance is and (3) focusing the elaborative explanation on the dissonance.

4. Practice

--follows explanation

--repeated opportunity to do the same skill as was explained.

5. Guided application

--provides opportunity to use skill under guidance in real text.

These techniques of explanation will not cure all your problems. For instance, if the students do not pay attention and are not on task, explanation can be wasted. Similarly, if students are working in materials which are too difficult for them, they will be too frustrated to process the explanation. However, provided that the prerequisites to good instruction are present, these explanation techniques will make reading skill instruction more effective.

Suggested Introduction and "Instructing" Sections
for the Kaleidoscope Lesson on
using Context to Get Meaning

Note: Remember that your introduction is not supposed to be exactly like ours. If what they say reflects the same principles and the same kind of thinking, you are doing it right.

Introduction

Sometimes when you are reading, you come to a word you have never seen or heard before, and for which you have no meaning at all. An example might be the word bay as in the sentence, "Tommy felt sure that the bay would win the blue ribbon." What I'm going to teach you today is to use what you know about other words around an unknown word to figure out some of the words you don't known when you run into them in your library books or other reading.

Instructing

Let me shown you how I figure out what bay means in this sentence. First, I realize that I don't known what bay means in this sentence. Then I look at the other sentences around it to see if there are clues to help me. I say to myself, "Whatever a bay is, it has to win a blue ribbon, it had a reddish-brown coat, it has a black tail, it's an animal and it's in a horse show. What kind of animal is in a horse show, has a black tail and reddish brown coat and would win a blue ribbon? A horse. So, bay must be some kind of horse.

Appendix C
Directions to Observers

Conventions to Follow for Taping Observations

A. When you pick up observation packet and before you arrive in classroom, prepare your tape in the recorder. You have have:

(1) Tape recorder with mic if necessary (particularly check the mic!)

(2) Adapter

(3) Long extension cord

(4) 2 - 90-minutes tapes

(5) Note pad

1. Make certain your tape recorder words properly and can be used to obtain the clearest possible vocal tones possible.

2. Observer should record the following information at start of side #1 on observation tape

   Play the tape before observation to make sure of recording

   - Date of observation

   - Teacher name and #

   - Observer's code number

3. Begin tape of observation following the above introduction

   - check to ensure that proper buttons pushed to record

4. Ask teacher where best place is to put tape to record the lesson to pick up teacher talk and as many student responses as possible. Ask teacher's cooperation to stay as close as possible to recorder - stressing how important it is to be able to understand verbation what's said by him/her.

B. If observation includes taping for management as well as lesson content - tape record for 60 minutes (1 hour) or as long as reading period lasts. If observation is for lesson content primarily, tape the entire lesson for low group (will probably to 10-20 minutes)

C. The second tape in your packet is for student interviews. Be sure to put this tape in recorder before you start interviewing. Again - talk in the date, teacher's name and your code number. Identify each student by their number (on your class list and first name).

D. In observation narrative:

1. Record your narrative on same tape as observation. Record narrative side 2 of tape.
2. Be sure to note start time of lesson.
3. Record time at 5 minute intervals. More frequently is something strikes you as significant.
4. Note time and nature of any interruptions in the lesson and what/who involved (if possible).
5. Use your field notes as prompts to guide your narrative. You will turn these in to Linda when you turn in tape.

E. Odds and Ends

1. Double-check your class list by showing it to teacher as students we have in her reading group.
2. Be sure to obtain a copy of any worksheets given out. At top note teacher's code number, date, reading group name.
3. Find out which pages in teachers edition were used by teacher.
4. On left side of your notes reproduce anything written on board by the teacher.
5. Make seating chart and get names of students to label seating with. Star the students selected for interviews.

Appendix D
Directions for Transcribing Tapes

Conventions to Follow for Teacher Explanation Project Tape Transcriptions

For all transcriptions (lessons & interviews)

1. In the heading for each page be sure to include:
    a. Tape number
    b. Side of tape (1 or 2)
    c. Consecutive page numbering
    d. Teacher's name (school on 1st page)
    e. An "X" to indicate observation or interview

2. For transcribing lessons:
    a. The verbatim teacher talk is most important. Many times student responses will be garbled or too faint to hear -in that case use "(inaudible)" to indicate this, or "(several students responding at once)."
    b. Often lessons are characaterized by lengthy pauses. All you may hear is general noise. In these cases note on a separate line in the text: (Lengthy Pause). If you pick up teacher responses at intervals in these periods, use this format:

        T: the remark

        S: the remark (if audible)

        (Lengthy Pause)

        T: the remark

    If there is an obvious interruption to the lesson (e.g., PA announcement, or third party conversion, etc.) note (Interruption) in text.

3. Observer narratives:
    a. Are located on Side 2 of the lesson tapes.
    b. Begin a new sheet to type narrative.
    c. Continue consecutive numbering of pages from the last page of the lesson transcript.

d. If the observer notes specific times followed by narrative, set off time on the left preceding the text.

4. Student interviews:

   a. Each interview tape contains a series of interviews. Begin each new interview with a different child on a new sheet.

   b. Number the pages of interview text consecutively for the set.

   c. Use the format:

      I:

      S:

      I:

      S:

   d. If there are obvious interruptions it is not necessary to transcribe extraneous remarks. Just note "(Interruption unrelated to interview)" on a separate line.

   e. If there are relatively long pauses in a child's response note "(Pause) or (Long Pause)."

   f. Use "(Inaudible)" to indicate you cannot make out what the child said. But attempt to recover as much of any response as you can.

5. Teacher Interviews:

   a. Use the format:

      I:

      T:

      I:

      T:

   b. You may edit out "uhs" and false starts to a response.

   c. Use "(Pause)" to indicate pauses in responses.

   d. Type the Interviewer narrative which follows each interview (usually on side 2 of the tape) on a separate sheet. Continue numbering the pages consecutively.

If you have any questions please contact Linda Vavrus - ph. 3-8763 (215 E.H.).

Appendix E
Lesson Plan Checklist

Skill Lesson Checklist

Lesson Structure	Yes	No
1. Introduction		
2. Explanation		
3. Re-structuring		
4. Practice		
5. Application		

Information Presented		
1. About the mental processing		
2. About why it is useful		
3. About the key elements		
4. About the sequence to follow		

Means of Explaining		
1. Teacher Modeling and Examples		
2. Highlighting		
3. Response to pupil re-structuring		
4. Review		
5. Practice		
6. Application		

Over-all Comments

Strengths:

Weaknesses:

Targets for improvement:

Appendix F

Rating Forms for Teacher Explanation and Related Material

Date: April 9, 1983

TO: Teacher Explanation Project Raters (Lessons): Dee, Doug, Sandy, Jan, and Ruth

FROM: Linda

SUBJECT: Procedures for Rating Lesson Transcripts

1. Obtain the manilla packet with your name on it from Laura's office on the front bookcase marked "Lesson Raters." This packet contains allotted transcripts, rating forms and summary sheets.

2. Each packet contains one week's worth of ratings. The date you should have your ratings completed will be noted.

3. Each pair of raters should arrange a meeting to discuss ratings given for each packet's lessons. The FINAL SUMMARY OF AGREED RATINGS form should be jointly completed at this session.

4. When step 3 is complete:

   A. IF ALL RATINGS ARE AGREED UPON, turn in all materials (see #1 above) for both raters, plus the final summary sheet to Linda. Place in her box in 252. If there are any concerns about the ratings, she will arrange a meetings with that pair of raters.

   B. IF THERE ARE IRRESOLVABLE DISAGREEMENTS BETWEEN RATERS FOR ANY RATING CATEGORY FOR A TEACHER(S), CONTACT LINDA (ph. 353-8763) TO ARRANGE A MEETING TO DISCUSS. Please be prompt in notifying Linda if this occurs. All materials will be turned in at the meeting to resolve disagreements.

5. When step 4 is complete, you can then pick up your next packet of lessons to rate.

TEACHER EXPLANATION PROJECT

Conventions for Rating Lesson Transcripts

1. Reading the entire lesson transcript before rating to get a general idea of what the lesson was about. Focus attention on the teacher's talk, not student responses.

1a. Make a subjective judgment as to whether this is a good, average or poor lesson.

2. Formulate your personal judgment about what would constitute explicitness (what, why, how) in a lesson on this topic.

3. Mark sections of the teacher's talk in the lesson which are relevant to the rating categories.

4. A rating of "2" constitutes an exemplar; a zero is total absence.

5. When in doubt about a rating, go low.

6. For II-4, if the teacher does not make statements about the mental processing, it receives a rating of zero.

7. Rate only what the teacher chooses to be explicit about; do not rate opportunities not taken.

8. Inaccuracies should be ignored. Make a note of the comments section to flag inaccuracies which in your judgment detract from mental processing or are repeated many times.

9. In lessons having multiple instructional activities, rate only those dealing with skills.

10. In lessons containing two or more identifiable skill lessons, rate each skill lesson separately.

11. If the skill being taught calls for use in a reading situation, practice and application should be in the same mode.

12. After the passage of a period of time, but before the meeting with your rating partner, confirm you original ratings.

Notice to Lesson Raters

Teacher Explanation Project

Add to your list of Conventions for lesson transcripts:

13. Remember to note any conflicts you encounter in rating application because of our stringent guidelines for scoring its presence in a lesson. This is particularly important if the teacher discusses or shows students how the skill can be applied over the long term in real reading situations (which would not show up in your application rating).

14. Practice should be identifiable in a lesson beyond examples discussed by the teacher as an extension of her explanation. Watch for a verbal signal in the teacher's talk that she is making a transition from explanation with extended examples (which may or may not involve student responses with teacher feedback and elaboration) to either group or individual practice of the skill.

April 26, 1983

NOTICE TO LESSON RATERS

From: Linda

Please add the following Conventions to your list for use when rating lesson transcripts:

15. When rating teacher modeling (II., 1), whenever the teacher's talk signals that she is "demonstrating" the "how" process for the skill, it is considered modeling. Use of pronoun (i.e, "I'll do..." vs. "you do...") during modeling is not the critical determiner of whether or not modeling is present.

16. When rating for the description of features to attend to when doing the skill (I., 3) generally features should be labeled by the teacher during the explanation (statement(s)) of "how", and the process of using the features demonstrated during the teacher's modeling.

    a. It is possible that the teacher will only label (but not explain how to use) features. Rate this accordingly.

    b. The point in the lesson where naming features and/or explaining their use occurs may vary from teacher to teacher. Positional variation is not a critical determiner for rating.

Teacher Code No. ____________

Rater ____________

Date of Rating ____________

Summary Ratings

Teacher Explanation

Comments

Part I -- Information Presented

1. States mental process ____
2. states usefulness ____
3. describes features ____
4. states sequence ____
5. example ____

Part II -- Means for Making Clear

1. modeling ____
2. directing attention ____
3. feedback and/or elaboration ____
4. review ____
5. practice ____
6. application ____

Total score: ____________

☐ Check the box if, in your opinion, the lesson contained teacher inaccuracies which detract from the mental processing being taught.

RATING TEACHER EXPLANATION

Teacher explanation is rated in two ways. The first focuses on the information the teacher presents about the mental processing required tc do the task. The second focuses on the means by which the teacher makes clear the information being presented Do not rate explanation based on what you believe is implied by the teacher. Rate on the basis of explicit evidence only.

Part I: The Information Presented About the Mental Processing Involved in Successfully Doing the Task.

1. Rate how clearly, consistently and explicitly the teacher states the mental process to be used (focusing not on learning "about main ideas"--but on how to identify the main idea).

   0 - it is hard to tell what mental process the teacher wants students to use when doing the task.

   1 - a mental process can be discerned, but it is vague, inconsistant or implicit rather than clear, consistent and explicit.

   2 - the mental process the students are to use in doing the task(s) is clearly, consistently and explicitly stated.

2. Rate how clearly, consistently and explicitly the teacher states the reason why the mental process would be immediately useful to students as they read.

   0 - there is no explanation of why the mental process would be useful or the reasons do not relate to immediate usefulness.

   1 - reasons for learning the mental process are stated but are unclear or inconsistent or implied.

   2 - clear and explicit reasons for immediate use of the process are stated without contradiction.

3. Rate how clearly, consistently and explicitly the teacher describes the features to attend to when doing the mental processing.

0 - the teacher does not talk about features to attend to when doing the mental processing.

1 - the teacher talks about the features of focus on when doing the mental processing but the explanation is incomplete, unclear or implied.

2 - the teacher's description of the features to focus on when doing the mental processing is clear, consistent and explicit.

4. Rate how clearly, consistently and explicitly the teacher states the sequence to be followed when doing the mental processing.

0 - the teacher does not talk about the sequence to follow when doing the mental processing.

1 - the teacher talks about a sequence to follow but the explanation is incomplete, unclear or implied.

2 - the teacher's talk about the sequence to follow in doing the mental processing is clear, consistent and explicit.

5. Rate the clarity and consistency of the example(s) the teacher provides or elicits regarding how to do the mental processing.

0 - no examples of the mental processing is provided or elicited.

1 - an example of the mental processing is provided (or elicited) but it is incomplete, unclear or the process to be employed is implied.

2 - a clear, explicit and consistent example of the mental processing is provided (or elicited).

Part II: The Means by which the Teacher Makes Clear the Information Presented

1. How explicitly did the teacher model how to do the mental processing to be used in completing the task?

0 - the teacher does not model the mental processing.

1 - the teacher tries to model the mental processing but it is unclear or inconsistent.

2 - the teacher provides a clear model of how to do the mental processing.

2. How explicitly did the teacher direct students' attention to the features to attend to when doing the mental processing (by providing highlights, cues, etc.)?

0 - there is no evidence that the teacher highlights or cues students to the features to attend to.

1 - there is some evidence that the teacher highlights or cues, but it is not explicit or clear or consistent.

2 - the teacher explicitly highlights or cues students to the features of the mental processing.

3. How explicitly did the teacher's feedback to student responses re-focus attention and/or elaborate on how to do the mental processing required to complete the task?

0 - the teacher's feedback to students is confined to correctness criteria and/or there is little evidence of specific or elaborative responses to students and/or the teacher's feedback is confusing.

1 - teacher's feedback to students is intended to focus (or re-focus) students on how to do the mental processing but is not explicit or consistent.

2 - teacher feedback to students focuses on how to do the mental processing and, when confusion arises, the teacher re-focuses student attention through appropriate elaboration.

4. How explicitly did the teacher review with students what mental process is being taught, its use in connected text and how to do it?

0 - the teacher provides no review of the mental processing.

1 - the teacher's review of mental processing is incomplete (does not include what _and_ why _and_ how) or is not explicit.

2 - the teacher provides explicit review of the mental processing of all three points.

5. Did the teacher provide students with independent or guided practice in using the mental processing in a contrived sample (workbook page, ditto sheet, etc.)?

0 - the teacher did not provide practice or it is not appropriate to the mental processing.

1 - the teacher provides practice but it is not totally relevant to and/or appropriate for the mental processing that was taught.

2 - the practice provided by the teacher calls for repeated opportunity to sue the mental processing that was taught.

6. Did the teacher help students apply the mental processing in a specific connected text (i.e., basal text stories or real life situations where the mental processing would be useful) or talk to students about doing such specific guided application in the near future?

   0 - the teacher does not explicitly help students apply the mental processing in the connected text and does not talk about doing so in the near future.

   1 - the teacher attempts to help students apply the mental processing to connected text (or talk about doing so in the near future) but such help is not clear or explicit.

   2 - the teacher provides explicit help to students in apply the mental processing to connected text.

Appendix G
Rating Form for Pupil Awareness and Related Material

Teacher Explanation Project
November 16, 1982

Student Interview

To determine the student's awareness of:

... What was explained

... When it is used

... How to do it

Instructions

1. The warm-up. The warm-up will vary from interviewer to interviewer. The important elements of the warm-up are to help the student feel at ease. The interviewer tells the student who he/she is and why they are there. It is important to avoid saying things that will intimidate i.e., "I'm here to find out what you know," while being careful not to give information that will influence the interviewee. Part of the warm-up are several questions that the pupil should be able to answer. "Do you have a reading lesson everyday? Do you read silently by yourself everyday? What is your favorite story? What are you currently reading?"

   Collection of Data. The data collection part of the interview consists of four sets of questions. Ask the first question. If it elicits the needed information, no further questions need be asked. Continue down the list if the child cannot or does not respond to the first question.

   Concluding the interview. The interview is concluded by thanking the pupil and assuring him/her that the information provided was helpful.

Sample Warm-up: First Interview

Hello. Thank you for coming. I am ________________ from Michigan State University and I'm trying to learn about how teachers teach. For instance, there may be things that your teacher does that really helps you learn. I'm interested in that. I'm going to ask you some questions, but first you can ask me any you'd like.

Sample Conclusion of the interview

Thank you __________________. This information is very helpful. I'll be back to see you again.

Collection of Data

Warm-up Questions

1. Tell me about reading class.
2. How different is it from last year?
3. What do you think about moving from room to room?

What was explained

In the lesson you had this morning...

1. "What were you learning to do?"
2. "What was the lesson abut?"
3. "What were you trying to do?"
4. "What was the teacher talking about?"

If the child cannot remember the lesson show him/her the material. Say: "When you were working on this, what were you learning to do?" Repeat the above sequence if needed. If the child can't answer go on to the next sequence.

When it is used

1. "How would you know when to use it?'
2. "What are some clues that would tell you to use what you learned?"
3. "Is there some way you know when to use what you learned?"
4. "If you were reading, when would you have a chance to use what you learned?"

Additional Question (use if student hasn't adequately answered previous question)

How to do it

1. "How do you do ______________? If your teacher was going to do this over, what would you suggest they do?

2. "If you were teaching this to someone else, what would you tell them to do?

3. Point to the material and say "When you did the lesson..."

TEACHER EXPLANATION PROJECT

Conventions for Rating Student Interviews for Awareness

1. Read the topic of the interview first. Then stop and think about what the child should say in responses related to that topic.

2. Read the entire interview first, then decide on a subjective total rating. Use the student's entire set of responses to make your rating for each of the three subcategories (what, why, and how).

   2a. A rating of "4" constitutes and exemplar; a "zero" is total absence.

3. Base your rating on specific references to what the child says. Do not infer more from the responses(s) than the child has actually stated.

4. If you are unsure about which of two ratings to give a response, give the lower rating.

5. Evaluate the student's responses on its own merits, not on the interviewer's skill in asking the questions or on the types of probes used.

6. If you feel a probe is leading the child in a particular direction, evaluate the child's ability to elaborate given the probe.

7. A child's use of incorrect terminology should not be penalized.

   7a. Once a total rating has been assigned, compare that total to you initial subjective rating.

8. Once a rating is assigned, do not revise it upward unless you can show a relevant passage from the text which you overlooked when doing the initial rating.

9. If a student responds to all three questions by referring to a language mode other than reading, rate the responses in terms of that mode (e.g., substitute "writing" for "reading").

RATING PUPIL AWARENESS

Determine pupil awareness by judging pupil response to the three interview questions and all subsequent elaborating probes which the researcher may have used in conjunction with each question. The criteria for pupil awareness follow.

1. A highly rated response to the question about "what" was being taught must include a specific reference to the process involved in completing the task and an example:

   0 -- No awareness (student does not know, is inaccurate or supplies a response that does not make sense).

   1 -- The response is a non-specific reference to the task ("We are learning about words.").

   2 -- The response refers to the name of the specific task which can be done successfully if the process is applied correctly or is an example of what can be done ("We are learning ou words.").

   3 -- The response includes a specific reference to the process being learned ("We are learning how to sound out ou words.").

   4 -- The response includes a specific reference to the process and an example ("We are learning how to sound out ou words, like in out.").

2. A highly rated response to the question about "why" or "when it would be used" must specify both the context in which it will be useful and what he/she is able to do in that context:

   0 -- No awareness or includes no reference to the specific task ("I'll get smarter" or "It'll help me when I grow up.").

   1 -- The response is not specific to the task but is related to reading language generally (I'll read better.").

   2 -- The response refers to an appropriate general category but not to the specific use for what was taught ("I can sound out words better.").

   3 -- The response includes specific reference to what he/she will be able to do but not the context in which it would be useful (I can sound out ou words.").

   OR

   specifies the context in which it would be useful but not what he/she will be able to do (I can use this when I come upon an unknown word in my book").

4 -- The response includes both what he/she will be able to do and the context in which it is useful ("When I come upon an unknown ou word in my library book, I'll be able to sound it out.").

3. A highly rated response to the question about "how do you do it" must include an example of how one does the mental processing associated with successful completion of the task or an appropriate sequence of steps to be followed.

0 -- No awareness.

1 -- The response is not specific to the mental processing to be used (I'll sound the word out.")

OR

is merely an example that does not illustrate conscious understanding of the mental processing to be used ("loud").

2 -- The response refers to features to attend to but not to the way they are used in doing the mental processing ("I say, 'l-ou-d'").

3 -- The response identifies some of the features to attend to and some understanding of the mental processing ("If I see a word that has ou in it, I say the sound of ou.").

4 -- The response includes a sequence of the mental processing or a specific example of the mental processing (when I meet an unknown word such as loud, I think first .... and then .... etc.).

Appendix H
Correspondence With Teachers

MICHIGAN STATE UNIVERSITY

INSTITUTE FOR RESEARCH ON TEACHING
COLLEGE OF EDUCATION · ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

October 11, 1982

Dear

Thank you for agreeing to participate in our research study on basic skills instruction in low reading groups. We appreciate your willingness to help develop techniques to improve reading instruction.

This letter contains information on the first steps to be taken in getting the study under way. In about three weeks, you will receive a second letter which will provide the remaining details. For the moment, you need to know the following:

1. Please reserve Wednesday, November 3 and Thursday, November 4 from 4 until 7:30. You will be asked to attend one day or the other (not both) depending upon whether you end up in the experimental group or the control group. Both sessions will be held at Kellogg Center. We will provide a complimentary dinner.

2. Please also reserve Thursday, November 11 from 4-5:30. If you end up in the experimental group, this will be the second training session (if you end up in the control group, you will not have to attend a second session.

3. Later this week, one of our team members will call you about arranging a time in the next week to give the students in your low reading group the Gates-McGinitie Reading Test. This is the pre-test for our study and requires slightly more than an hour, including time for direction-giving and a short break between the two sub-tests. We would appreciate it if you could arrange for our researcher to administer the test in a location which is relatively quiet and uninterrupted.

4. The first observation of the reading instruction in the low reading group will occur a day or two after the test is given. The researcher who gives the test will ask you to suggest a time. The object of this observation is to get a sense of what usually happens during reading time in the low group. Please help us by suggesting a typical day in which routine instruction occurs with the low group.

5. Parent consent forms are enclosed. Please have these completed by the parent or guardian of the students in your low reading group. We will pick them up while we are there for the first observation.

We hope to have all the tests given and the first observations completed by October 29. November 1, you will receive the second letter. In this letter, you will be informed of your assignment to the experimental or the control group and additional details regarding the meetings to be held on Wednesday, November 3 or Thursday, November 4 will be provided.

Once again, thank you for agreeing to participate in the study.

Sincerely,

Cassandra L. Book
Assistant Dean
Teacher Education
(355-1787)

Gerald G. Duffy
Professor
(353-9760)

Laura R. Roehler
Associate Professor
(353-8763)

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MICHIGAN STATE UNIVERSITY

INSTITUTE FOR RESEARCH ON TEACHING
COLLEGE OF EDUCATION · ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

February 1983

Dear Participating Teacher:

Enclosed is the tape of your third lesson (side 1) and the student interviews following that lesson (side 2). A letter from your observer giving you feedback on the lesson is also enclosed.

Please listen to the tape and read your observer's letter. Then complete the self-evaluation forms (Skill Lesson Checklist and Student Awareness Questions). If you wish to make additional comments about your use of explanation techniques, write them on the back of the Skill Lesson Checklist. Return the completed forms to us in the enclosed self-addressed, stamped envelope.

Thanks for your cooperation.

Sincerely,

Laura R. Roehler

Laura Roehler
Associate Professor

Gerald G. Duffy
Professor

ms

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MSU is an Affirmative Action/Equal Opportunity Institution

MICHIGAN STATE UNIVERSITY

INSTITUTE FOR RESEARCH ON TEACHING
COLLEGE OF EDUCATION · ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

March 8, 1983

Dear Participating Teacher:

Enclosed is the tape of your most recently observed reading lesson and of the student interview conducted following the lesson.

Several of you have indicated that you found the written feedback to be helpful. Consequently, we have decided to give you such feedback again this time. Your observer's comments are enclosed. After the last observation, however, we will only enclose the self-evaluation forms. If you wish additional feedback after that lesson, your observer will be happy to provide it after you have completed the self-evaluation forms.

Just a reminder: Please return your self-evaluation forms from the last lesson and from this lesson as soon as possible. We are anxious to hear how you perceive your efforts to implement explanation strategies.

Thank you.

Sincerely,

Laura R. Roehler
Gerald G. Duffy

[illegible]

Appendix I
Teacher Interview Protocols

Teacher Interviews #1

Instructions to Interviewers

1. Schedule your first interview with Treatment teachers as soon as possible. After school is the most desirable time to allow 1 hour for the interview. If a teacher cannot meet after school, schedule for a lunch time or probe for other times the teacher can meet with you (e..g, Part of a planning day).
2. Time constraints will make it important that you keep the lesson focused on the format of questions attached.
3. Be sure to tape record the interview. Linda will have labeled tapes available. Make sure your recorder is operating properly in advance of your interview.
4. General probes useful in encouraging the teacher to elaborate on brief responses:
    - Explain that to me.
    - Tell me more about it.
    - I'm not sure what you mean, can you give me an example?
5. Following your interview, with the tape remaining on side 2 of the audio tape, record a brief summary narrative of your overall impression of the interview.

Teacher Interview #1

Questions

The first interview conducted with Treatment teachers will follow the format below:

I. Background Information

   A. Name

   B. Current grade

   C. Years at this level

   D. Other grades taught

   E. Years at other levels

   F. Describe the variety (kinds) of reading lessons you teach?

   G. What texts are presently being used in your room (with the low group particularly)?

II. Explanation

   A. Think about your skill lesson for a moment:

      1. How are the skill lessons you are teaching now different from the ones you taught in the fall?

      2. How are they similar? If different, to what do you attribute the differences?

      3. PROBE: Using the guide (attached) of important components, ask the following questions about any components the teacher did not volunteer comments on the questions.

         A. 1-2. (continue probing until all components are covered)

            1) Have you been using ________? How have you been using it in lessons?

            2) Is this different form the way you taught in the fall?

   B. Do you find yourself teaching skill lessons differently on the days you're not observed? How? (Probe)

   C. Are there certain skills or activities you decide not to use explanation behavior with? Are you selective in use of explanation? If yes, why?

D. (NOTE TO INTERVIEWER: Judge your time at this point and ask this series of questions if you have ample time remaining to complete all other sections below:)

Thinking about the sequence of skills (presented in basals) to be taught during the year:

1. How do you decide what skill to teach next?

2. Is the selection procedure different from the one you used in the fall?

   a) If yes - how (probe)

   b) If no - describe for me what has been particularly advantageous about using this procedure for you. (Probe for why desireable)

III. Student Awareness and Achievement

A. Student Awareness - think about your students now and in the fall

1. Do you students seem to be more aware of the way reading skills are used? (Probe - can you tell me about it; what do you define as awareness? How evident is this awareness?)

2. How is this awareness different than the behavior you observed in the fall?

B. Student Achievement

1. Do your students seem to be achieving more? Explain. Tell me about that. (Probe - Upon what evidence is this assessment based? How evident is this better achievement?)

2. How is this achievement different than the behaviors you observed in the fall?

IV. Staff Development

Think about the interventions a moment. Remind them about nature of each intervention (where held) if they need prompt.

1. What helped you the most?

2. What could have been improved?

3. What kind of further assistance would you find helpful? (Probe - tell me about it)

V. Transfer to other subjects

Think about teacher explanation behavior

1. Have you used explanation behavior in any other content lesson? Which ones? Ask for 1-2 examples.
2. What factors helped you to decide whether to use the teacher explanation behavior? (Probe - tell me more about _______ factor?)
3. What was successful?
4. What wasn't successful?
5. Are there types of lessons that you think aren't appropriate for using teacher explanation behavior? If yes, why are these less appropriate? If no, what features of explanation behavior make it transferable to other areas besides reading?

DIRECTION FOR INTERVIEWING TREATMENT TEACHERS

Teacher Explanation Project

I. Agenda

  A. Interview Questions

  B. Feedback to last observed lesson

  C. Discussion of the study

  D. Testing Results

  E. Pay

II. Instructions to interviewer

  A. Audio tape of the meeting:

The entire meeting with each teacher will be taped. You have been given a 90-minutes cassette tape for each interview. Your meetings should last 90 minutes or less per teacher. You have, however, been supplied with 3 extra tapes. Carry an extra to each interview in the event that your interview exceeds 90 minutes. Be sure and label the extra tape as a continuation of the initial one used. If you need additional extra tapes, ask Linda.

Be sure to check the operation of you recorder in advance and enter an identity heading (include teacher number and name: date and location of interview; your interview number (Cass-01, Gerry-02, Laura-03, Linda-04).

If you wish to add any additional comments about the content or context of the meeting, do so at the end of the completed interview. Note this portion by labeling it "interviewer Comments."

  B. It is important that you follow the order of times as listed in the Agenda.

  C. Time allotments: (Approximately)

    1. Interview questions - 20-30 minutes

    2. Feedback to last observed lesson - 10-15 minutes

    3. Discussion of the study - 10-15 minutes

4. Post test results and possible discussion which may be generated as teacher looks them over - 10-15 minutes

5. Pay (information about) and wrap-up - 5 minutes.

D. Payment of stipend: Make sure you treatment teachers understand we are only allowed to pay them for time spent with us beyond school hours (i.e., interviews and after school meetings).

Be sure to obtain each teacher's full name, summer address and social security number. We must have this information to process their check.

TREATMENT TEACHER INTERVIEW #2

Questions

I. Think about your reading skill lessons for a moment:

A. Which components of explanation behavior have you most consistently used? Explain.

NOTE: When the teacher has finished, use the attached skill checklist and PROBE:

(If any from the list were omitted) What about ______________? Why haven't you used ____________?

B. Have you continued using explanation techniques in structuring your skill lessons since you know your observation are completed? Tell me about it.

C. Give me an example of what you want students to be able to do at the end of a skill lesson (PROBE for process outcomes vs. nomenclature outcomes, etc.)

D. What are your perceptions about evaluating your final lesson without prior feedback from your observer? (PROBE: Tell me about it.)

II. Now consider the questions you ask your students during skill instruction:

1. Are there different kinds of questions that you use in your skill instruction?

If yes, describe the different kinds and the purpose of each type.

If no, describe the kind of questions you ask and the purpose of that type.

NOTE: The interviewer should jot these down as listed by the teacher for later reference.

2. How do you use questioning in the ________________ component of your skill lesson?

NOTE: Use each of the 5 lessons structure components listed on the attached checklist.)

3. Has the way you use questioning in your skill lessons changed since the beginning of the year? If yes, tell me about it. What factors do you think account for this change?

4. Now think about the kinds of questions you identified, what cues prompt you to ask ________________ kinds of questions?

   NOTE: Ask for each kind of question identified by the teacher.

   PROBE: If the teacher does not cover, ask what role questioning plays when confronted by management problems, inattentive behavior, student confusion over lesson content, etc.)

5. When you are using ___________________ questions (i.e., restructuring, management, skill practice, etc.) questions, what helps you decide how many to use?

6. During which parts of an explanation skill lesson do you ask the most questions? the least? Explain.

7. How do you decide who to call on to answer your questions:

   PROBE: How do you decide when to ask questions of the whole group? of individual students?

8. How would you compare the type of questioning you do in basal story lessons to your questioning during an explanation skill lesson?

9. Do you consider yourself a high or low user of questions in your skill instruction? Explain.

10. When you think about how you currently use questioning in skill lessons using explanation behavior, have your questioning procedures changed since the beginning of the study? How are they similar? Different?

    PROBE: Focus on your low group students; Changes in types of questions you ask? What about quantity of questions asked?

11. When you are trying to think of questions to ask in skill lessons, what sources do you use?

    PROBES: Do you think through or plan questions in advance? Explain.

    How do you sue the Teacher's Edition or workbook of your basal series in your questioning? other commercial materials?

III. Student Awareness and Achievement

A. What is the usefulness of teaching your students reading skills?

1. Do your students seem to be aware of this reason? Do they know how reading skills are to be used? Tell me about it.

2. What differences (if any) have you noticed in awareness between the students who were interviewed and other students in the group?

   NOTE: Do not ask this if all students in a small group were interviewed!

B. Have you noticed any differences in the achievement of interviewed students compared to other students in the group (class)?

1. In general what has been the attendance record of the interviewed students?

   NOTE: The interviewer has been provided with a list of the students interviewed in each group.

IV. OPTIONAL QUESTIONS IF YOU HAVE TIME

A. Think about the five observed lessons--(interviewer has topic list and reviews these with teacher):

1. Which do you consider your best lesson? What criteria do you use in deciding whether it is good?

2. If you could do it over, what would you change and why?

B. In which of the four lessons following the Kellogg Center presentation of explanation techniques were you best able to use explanation? Explain.

Note: Ask question #2, if no covered as part of teacher's answer to #1.

V. Staff Development

1. What kind of further assistance from us would you find most helpful next year?

2. We realize its hard not to talk to friends and fellow teachers about a study of this kind--what and how you're doing and how your students are doing. However, to help us in analyzing data it would be helpful to know what information you might have shared with other teachers in the building....

3. Since the last interview, have you used explanation behavior in any other content lessons? Which ones? What was successful? What wasn't successful? PROBE for 1-2 examples.

Appendix J
Consent Forms

MICHIGAN STATE UNIVERSITY

INSTITUTE FOR RESEARCH ON TEACHING
COLLEGE OF EDUCATION · ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

June 1, 1983

I understand that I will be receiving an honorary stipend for my participation in the Teacher Explanation Study during the 1982-83 school year. I understand that my name and the names of students will remain confidential and that all data will be reported in a non-identifiable way.

Signature

Name Printed

Summer Address

Social Security Number

MSU is an Affirmative Action/Equal Opportunity Institution

MICHIGAN STATE UNIVERSITY

INSTITUTE FOR RESEARCH ON TEACHING
COLLEGE OF EDUCATION · ERICKSON HALL

EAST LANSING · MICHIGAN · 48824

October 11, 1982

Dear Parent:

Your child's teacher has volunteered to work with researchers from Michigan State University's Institute for Research on Teaching. The research study has been read and approved by the principal of your school and representatives of the Lansing School District.

The purpose of the study is to try out new techniques to help children improve their reading skills and to help teachers as they teach children to read. The techniques have been tried in a school outside Lansing with some success, but more information is needed. The study will work like this. The researchers will show the teacher how to explain the reading lesson. The researchers will watch the teacher as he/she teaches the lesson. The effect of the study will be measured using the results of a reading achievement test. Neither your child's name nor his/her teacher's name will be used in the report.

We hope you will allow your child to participate. If you agree, please sign and return the attached consent form to your child's teacher. If you have questions, please call me at Michigan State University (353-9760) or contact your school principal.

Sincerely,

Gerald G. Duffy
Professor

ms

CONSENT FORM

My child has my permission to participate in the study of new techniques for teaching reading skills.

____
(signature of parent or guardian)